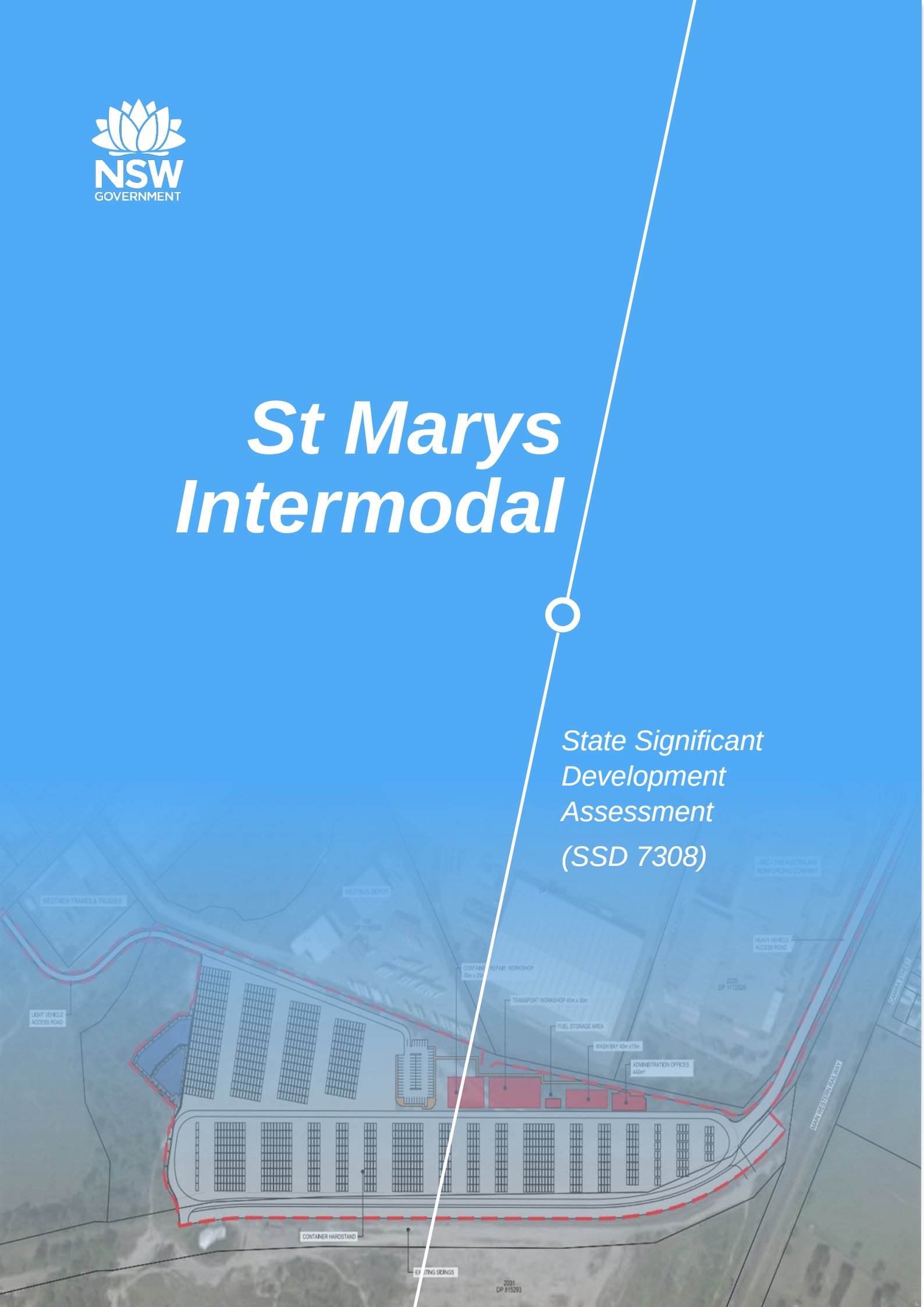
NSW GOVERNMENT

St Marys Intermodal

State Significant Development Assessment

(SSD 7308)



May 2020

Cover photo

Overall Development Layout (Source: St Marys Freight Hub Response to Submissions Report, prepared by Urbanco and Site Planning + Design, dated October 2019).

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Glossary

Abbreviation	Definition
AEP	Annual Exceedance Probability
AHD	Australian Height Datum
Applicant	Pacific National Pty Ltd
BCA	Building Code of Australia
CIV	Capital Investment Value
Consent	Development Consent
Council	Penrith City Council
Department	Department of Planning, Industry and Environment
EES Group	Environment, Energy and Science Group of the Department of Planning, Industry and Environment
EIS	Environmental Impact Statement
EPA	Environment Protection Authority
EP&A Act	*Environmental Planning and Assessment Act 1979*
EP&A Regulation	Environmental Planning and Assessment Regulation 2000
EPBC Act	*Environment Protection and Biodiversity Conservation Act 1999*
EPI	Environmental Planning Instrument
EPL	Environment Protection Licence
ESD	Ecologically Sustainable Development
FRNSW	Fire and Rescue NSW
ICNG	Interim Construction Noise Guidelines (EPA, 2009)
LEP	Local Environmental Plan
Minister	Minister for Planning and Public Spaces
NPI	Noise Policy for Industry (EPA, 2017)
NVIA	Noise and Vibration Impact Assessment (NVIA) prepared by AECOM, dated 11 February 2020
PMF	Probable Maximum Flood
RING	Rail Infrastructure Noise Guideline (EPA, 2013)
RtS	Response to Submissions
SEARs	Secretary's Environmental Assessment Requirements
Secretary	Secretary of the Department of Planning, Industry and Environment
SEPP	State Environmental Planning Policy

SRD SEPP	*State Environmental Planning Policy (State and Regional Development) 2011*
SSD	State Significant Development
TEU	Twenty-foot equivalent unit (freight container)
TfNSW	Transport for NSW
TfNSW (RMS)	Transport for NSW (Roads and Maritime Services)

Executive Summary

This report provides an assessment of a State significant development (SSD) application lodged by Pacific National Pty Ltd (the Applicant) seeking approval for the proposed development of a new intermodal facility named St Marys Intermodal Freight Hub (SSD 7308), within the Penrith local government area (LGA).

The proposal seeks approval for the staged construction and operation of an intermodal (road and rail) terminal and container park with an ultimate operating capacity of 301,000 twenty-foot equivalent units (TEU) (freight container) annual throughput. The St Marys Intermodal Freight Hub is proposed to operate up to 24 hours per day, 7 days per week, with 80% of heavy vehicle movements expected to occur between 6am and 6pm, 7 days a week. The proposal would be operated by Pacific National, with containers transported between Port Botany and St Mary's via a maximum of five 600 metre freight trains per day.

The Department of Planning, Industry and Environment (the Department) considers the application is consistent with the objects of the Environmental Planning and Assessment Act 1979 (EP&A Act), including ecologically sustainable development, and the relevant strategic plans, including *Future Transport Strategy 2056, A Metropolis of Three Cities - The Greater Sydney Regional Plan*, and the *Western District Plan*. The Department is satisfied that the site is suitable for the proposal and would contribute to expanded intermodal rail capacity in Western Sydney. The Department is satisfied that the key issues (traffic, access and parking; noise; contamination; biodiversity; stormwater, drainage and flooding) were satisfactorily considered by the Applicant and found to be acceptable with the inclusion of environmental mitigation measures and recommended conditions of consent.

The Department considers that traffic impacts associated with the development would be able to be managed by the implementation of an adaptive management plan for operations, with impacts to be verified and addressed based on regular monitoring of traffic movements, and in accordance with the recommendations of independent traffic audits to be conducted at key stages of the life of the development. The Department considers that the Applicant has proposed feasible and reasonable measures to control noise impacts through designing the site and selection of plant and equipment, including commitment to use 'soft landing' technologies for container handling. To further reduce noise, the Department has recommended the Applicant relocate its proposed noise barrier to the south of the Main Western rail corridor, which would avoid the need for additional noise reduction treatments at residents south of the site.

The Department considers that contamination impacts would be appropriately managed in accordance with the Applicant's Remediation Action Plan, and has recommended the Applicant commission an accredited Site Auditor to prepare a Site Audit Report and Section A Site Audit Statement that verifies the site is remediated and suitable for use. The Department also considers that biodiversity impacts

would be appropriately managed and offset, subject to preparation of a Biodiversity Management sub-plan. Further, stormwater and flooding impacts would be managed through implementation of stormwater management systems on site, and preparation of a Stormwater Quality Management Plan.

The Department has also considered air quality, Aboriginal heritage, non-indigenous heritage, hazards, biosecurity, visual impact, landscaping and groundwater impacts, and has recommended appropriate conditions to satisfactorily manage those impacts.

The Department concludes the proposal is in the public interest and recommends that the application be approved subject to conditions.

The proposal has a Capital Investment Value (CIV) of $33,212,000 and would generate 150 (168 including additional train drivers) operational jobs and 60 construction jobs. The proposal is SSD under clause 19(1)(b) of Schedule 1 of the *State Environmental Planning Policy (State and Regional Development) 2011* (SRD SEPP), as it is development for the purpose of railway freight terminals, sidings and inter-modal facilities, with a CIV of more than $30 million. Therefore, the Minister for Planning and Public Spaces is the consent authority.

The application was publicly exhibited between 31 May 2019 and 27 June 2019. The Department received a total of 15 submissions comprising ten from public authorities (including Penrith City Council), three from organisations (including two objections) and two submissions from the public. The key issues raised in the submissions included operational traffic impacts to the local road network, heavy vehicle access to the site, operational noise impacts, disposal of contaminated material (including asbestos), calculation of biodiversity offsets, stormwater and flooding impacts, and operational air quality impacts from container stacking equipment and locomotives.

The Applicant's RtS, submitted on 4 October 2019, addressed the key issues raised in the submissions, and included further information, an amended site layout, the relocation of staff and visitor parking, relocation of buildings on site, construction of a noise wall, a revised route for heavy vehicles, and a revised stormwater management design to include a bio-retention sediment basin in the northern portion of the site. An additional four submissions from public authorities (including Penrith City Council) were received in response to the Applicant's RtS. The Applicant submitted supplementary information between December 2019 and April 2020, addressing concerns raised by the Department with regard to heavy vehicle access, extended construction work hours, staging, location of the proposed noise wall and additional noise modelling.

Contents

1. Introduction

This report provides an assessment of a State significant development (SSD) application lodged under Part 4, Division 4.1 of the *Environmental Planning and Assessment Act 1979* (EP&A Act) for the St Marys Intermodal Freight Hub (the proposal).

Pacific National Pty Ltd (the Applicant) is seeking approval for construction and operation of an intermodal (road and rail) terminal and container park with an operating capacity of 301,000 twenty-foot equivalent unit (TEU) annual throughput. The Applicant intends to operate the container park and rail sidings 24 hours per day, 7 days per week. Freight containers would be received from Port Botany and stored on site for up to 48 hours until they are transported by truck to their final destination. The facility would also receive empty containers and store empty containers onsite until they are loaded on trains for transportation back to Port Botany.

1.1 Site description

The site is located within the suburb of St Marys, approximately 45 kilometres (km) west of the Sydney Central Business District and 49 km west of Port Botany, in the Penrith local government area. **Figure 1** below shows the location of the site within the context of Sydney.

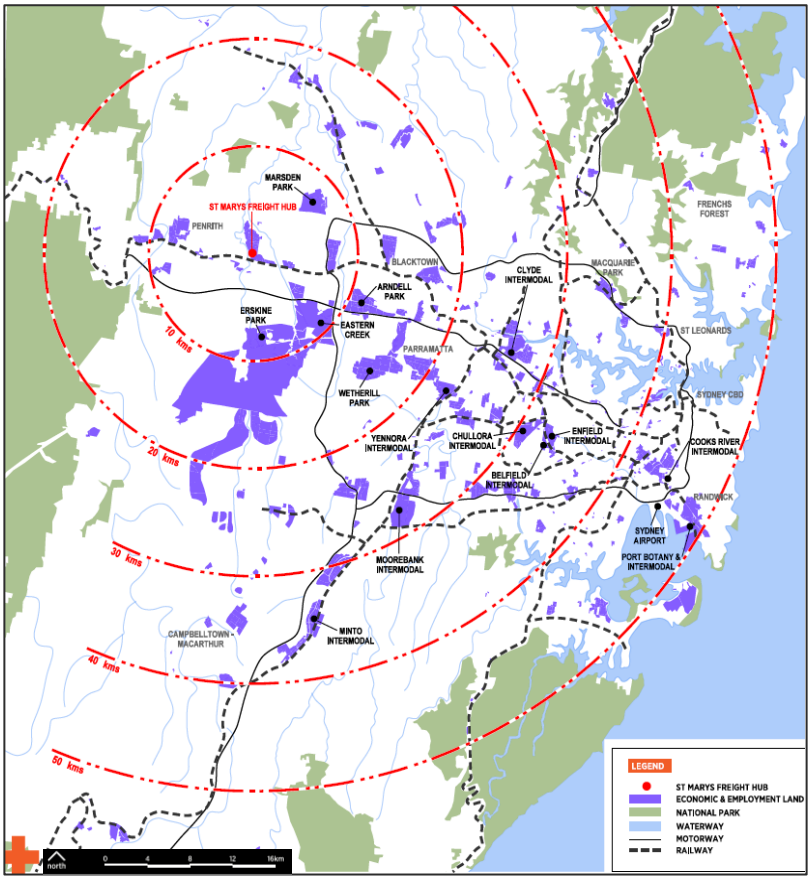


Figure 1 | Regional/Local context map (Source: Applicant's EIS)

The site is located partially on Lot 2 DP 876781, Lot 3 DP 876781 and Lot 196 DP 31912, which have a combined total area of approximately 43 ha. The subject site only comprises approximately 9.6 ha of this area as shown in **Figure 2**.

The area is served by the local, regional and state road network, including the M4 Western Motorway and Great Western Highway (A44), connecting the region to eastern Sydney and western regional NSW, and the Westlink M7 connecting to southern and northern NSW and the wider state road network. The Great Western Railway line, adjacent to the site, provides freight rail connections to Port Botany (via the metropolitan freight rail network) and between Sydney, regional NSW and interstate freight rail lines, including the Inland Rail freight rail connection through Parkes to Brisbane and Melbourne, once complete.

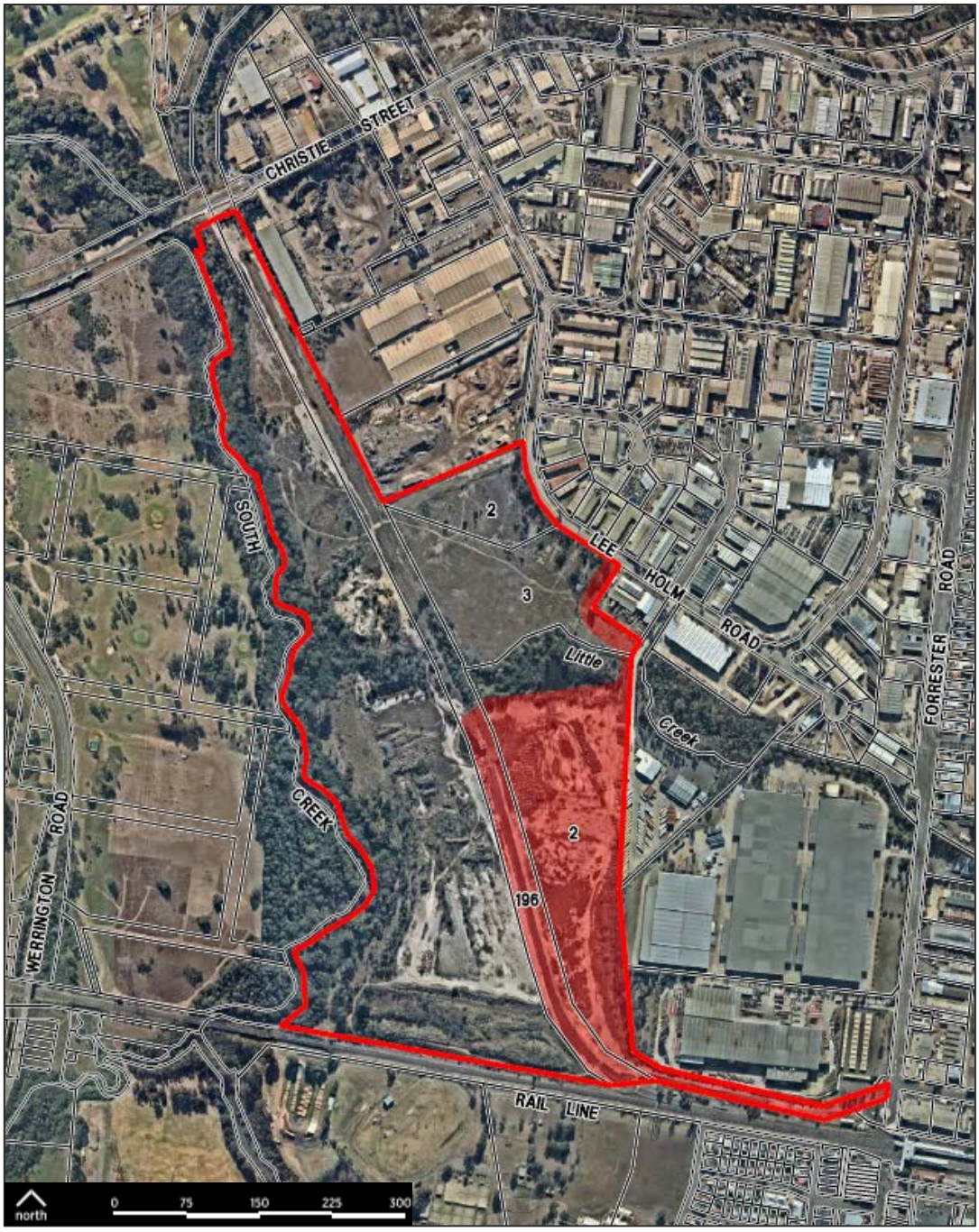


Figure 2 | Site location shaded in red (Source: Applicant's EIS)

The site is mostly cleared and levelled due to previous developments and activities on the site. The history of the site is detailed below in **Section 1.2**.

The subject site is surrounded by:

- Lee Holm Road, Forrester Road and the Dunheved Business (Industrial) Park to the east
- the Great Western Railway passenger and freight rail line, the St Marys Senior High School sports fields and public recreation fields to the south
- the St Marys passenger train station and associated multi-level car parking station and the St Marys town centre to the south east
- a portion of the broader site (west of the rail sidings), South Creek, the Colonial Golf and Footgolf Course, the Troy Adams Archery Field and areas of public recreation to the west
- the Dunheved Business (Industrial) Park and the Dunheved Golf Course to the north.

1.2 Site history

The broader site that is owned by the Applicant as shown in **Figure 2** has had various uses. The history of the broader site is described in **Table 2** below.

Table 1 | Site history

Year	Activities undertaken on site
1941 - 1969	The Commonwealth Government acquired the site and surrounding lands for defence purposes.
1969 – 1984	Part of lots 2 and 3 were owned by James Hardie & Co Pty Limited. It is unknown if the site was used to manufacture products.
1986 - 1999	The broader site was acquired by the State Rail Authority (SRA) as a site to house its Tangara train maintenance and storage facility in 1986. Initial earthworks to raise the level of the broader site commenced in 1987, however, this was abandoned in the late 1990s, during which time the broader site was unused. The broader site was filled with material excavated from the Northside Sewerage Tunnel Project in 1999 with material brought in by train from White Bay.
2000	A previous designated development application for the Western Sydney Rail Freight Terminal (WSRFT), was approved by the then Minister for Urban Affairs and Planning in 2000 for a portion of the broader site. This previous consent was issued to a different Applicant and different landowner.
2001 - 2002	In June 2001, FreightCorp became the registered proprietor of the former SRA land. In February 2002 Pacific National acquired the land.
2005	In December 2005, physical site works commenced in accordance with the previous development consent granted by the then Minister (DA No. 170-05-2000) for the WSRFT. No further approved works have occurred since. Currently, the rail spur operates as a siding for the storage of freight trains.

1.3 Previous approval

On 19 December 2000, the then Minister for Urban Affairs and Planning approved the WSRFT (DA No. 170-05-2000), which included three main components:

- a rail-based grain receival, storage and processing facility, handling up to 150,000 tonnes of grain per annum (Precinct A)
- an intermodal rail freight terminal, handling up to 55,000 standard shipping containers per annum, with capacity to store 1,500 containers (Precinct B)
- a sand/sandstone recycling facility, potentially receiving up to 750,000 tonnes of crushed sandstone (Precinct C, part of Precinct B and the Dunheved Cutting).

2. Project

The key components and features of the proposal (refined in the Response to Submissions and supplementary information provided by the Applicant) is provided in **Table 2** and **Section 2.1** and **2.3**. Key components and features of the individual stages are provided in **Section 2.2.**

Table 2 | Main components of the project

Aspect	Description
Project Summary	Construction and operation of an intermodal (road and rail) terminal and container park with an operating capacity of 301,000 twenty-foot equivalent units (TEU) (freight containers) annual throughput.
Hardstand areas	Construction of hardstand areas for container storage and laydown, rail and vehicle loading and unloading areas.
Permanent structures / uses	• Wash bay area • Office building pad site • Fuel storage area • Container workshop (repair bay) pad site • Transport workshop pad site • Staff and visitor light vehicle parking bays (adjoining operational and administrative buildings) • Heavy vehicle parking bays.
Ancillary development	• Signage and landscaping • Utility services to support the proposed development including drainage, potable water, water (for firefighting purposes), power, data, security and sewerage • Minor realignment of a section of the Sydney Trains high voltage overhead power line at the southern end of the site • Minor clearing of areas of vegetation regrowth, remediation (if required) and minor earthworks • Electrical transformer.
New internal access roads	Construction of new internal access roads providing separate ingress and egress for heavy and light vehicles during operations, as follows: • to/from Forrester Road for heavy vehicles; and • to/from Lee Holm Road for light vehicles.
Construction timeframe	Approximately 7 months.
Construction staging	Two indicative stages of construction: • Stage 1: Site establishment and terminal construction • Stage 2: Empty container park construction.
Site area	9.6 ha.
Vehicle parking areas	• 62 car parking spaces • 1 Person with a Disability (PWD) car parking space

	• 7 heavy vehicle parking bays.
Landscaping	• Landscaping and vegetation planting along the internal road network. • Vegetation and plant screening at: o both site entrances from Lee Holm Road and Forrester Road o along the boundary with adjoining properties to the east o the existing sedimentation basin to the north o an interface to existing vegetation associated with Little Creek o along the railway reserve to the south.
Drainage	• Construction of a pit and pipe network within the proposed road and hardstand areas to collect and discharge runoff to Little Creek • Stormwater treatment systems, including rainwater collection tanks connected to all buildings and a 1000m^3 capacity sediment and bio-retention attenuation basin • New trunk drainage system through the site that will connect to the existing 675mm diameter pipe.
Hours of operation	24 hours per day, 7 days per week.
Hours of construction	Proposed core construction work hours: • 7 am to 6 pm Monday to Friday • 8 am to 12 pm Saturday • no construction work on Sundays or public holidays.
Signage	• Construction signage would be included as part of the proposal • No advertising (corporate) signage is proposed as part of the proposal. A Signage Plan that complies with the Advertising and Signage SEPP would be prepared as part of a subsequent detailed Development Application.
Jobs	• 168 full time operational jobs • 60 full time construction jobs during the construction phase.
CIV	$33,212,000
Remediation	Remediation of the following areas to be completed prior to construction: • known asbestos impacted fill soils from the northern portion of the site • soil from stockpile SP4 impacted with pesticides (DDT, DDD and DDE) at levels exceeding scheduled chemical waste criteria. The Department notes a Remediation Action Plan has been prepared by the Applicant to manage remediation works on the site.

2.1 Physical layout and design

The proposal is for an intermodal (road and rail) terminal and container park. A diagram of the facility is shown in **Figure 3** (below).

Access

During operation, heavy vehicles would enter and exit the facility from Forrester Road only. Site access management for heavy vehicles entering the Forrester Road entrance would prioritise an incoming truck by temporarily holding an outgoing truck within the facility under CCTV and stop sign control. Motion sensors would also trigger a low frequency alarm/light at the gate to facilitate safe

vehicular movements. The Applicant advised the Forrester Road entrance and internal heavy vehicle access road would be suitable for two passing B-double vehicles. Dedicated truck parking and truck passing bays would be facilitated along the internal truck access road.

Light vehicles would enter and exit the facility from Lee Holm Road only and no heavy vehicles would access the facility from the Lee Holm Road entrance during operation. 62 staff and visitor light vehicle car parking bays would be located adjacent to the facility's operational and administrative buildings, accessed from the Lee Holm Road entrance only. Light vehicle car parking bays would be separated from internal truck movement and manoeuvring areas within the facility.

Intermodal facility and rail sidings

Mobile container handling equipment, including reach stackers and forklifts, would be located along the existing rail sidings to load/unload containers to/from the trains. The container storage area would be located immediately to the east of the existing rail sidings and an empty container storage area would be located within the northern section of the site (**Figure 3**).

The stack height of containers (full and empty) would be to a maximum of 5 high (i.e. 14.5m for a five x 2.9m high containers stack). Stack heights would vary throughout the day (not reaching more than 5 high) and 80% of container loading and unloading activity would occur between 5am to 10pm. Containers would remain at the facility for up to 48 hours before being loaded and transported to their final destination in Western Sydney. Empty containers would be returned to the site and stored ahead of being reloaded onto trains to be transported back to Port Botany.

The proposal includes construction of a fuel storage area and wash bay area in the centre/south of the site, and includes construction of an administration building pad site, container workshop (repair bay) pad site and transport workshop pad site. However, construction of buildings on top of these pad sites is not included as part of the proposal. Construction of these buildings would be subject to a separate development application to reflect user requirements once established.

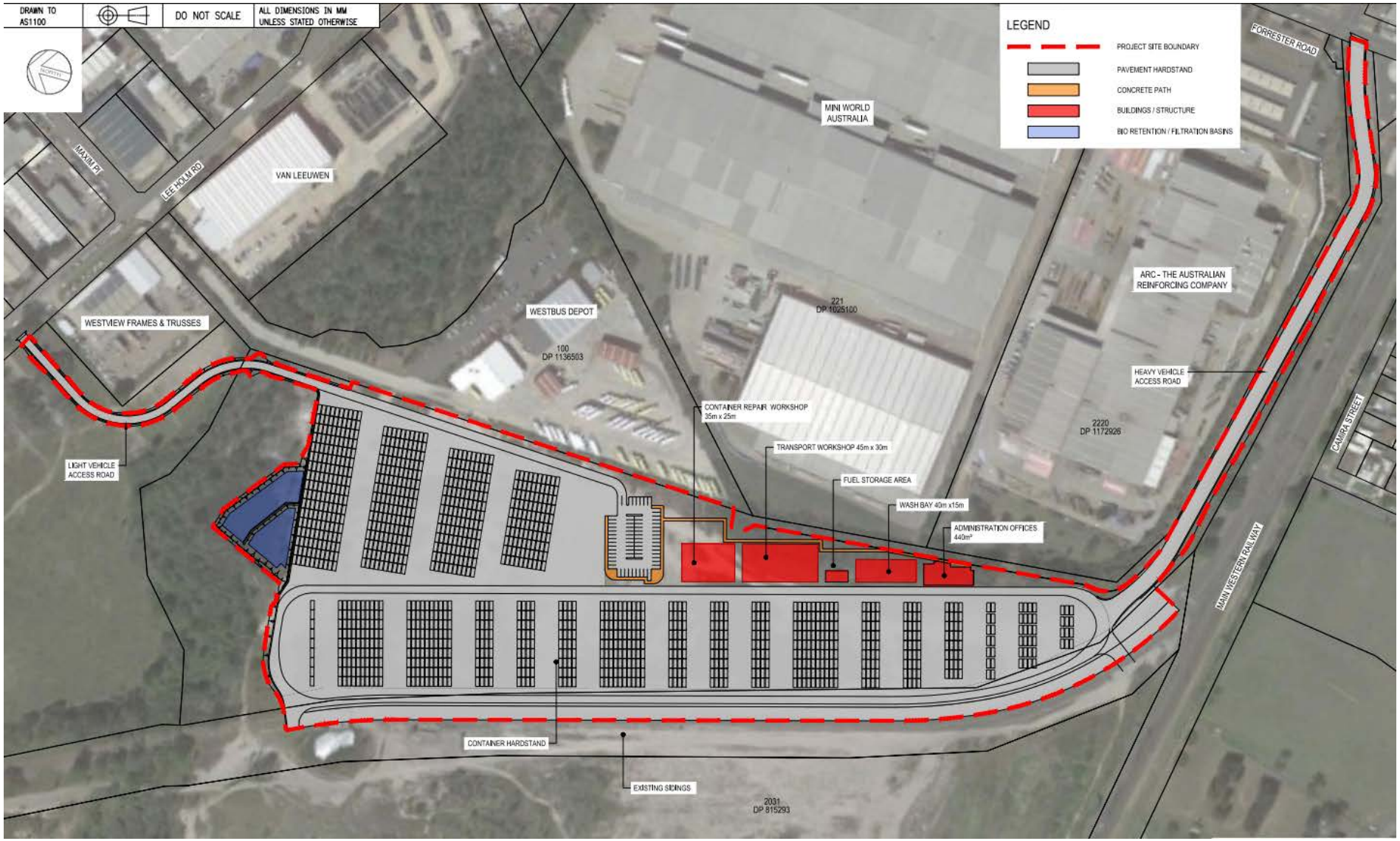


Figure 3 | Overall development layout (Source: Applicant's RtS)

2.2 Construction Staging/Timing

The Applicant intends to stage construction of the proposal into two stages. The staging plans provided in the Applicant's Preliminary Construction Staging Strategy are shown in **Figure 4** and **5**. The key stages of the construction program include:

Stage 1

- clearing, earthworks and remediation works
- construction of terminal hardstand areas for container storage and laydown (and vehicle loading and unloading areas)
- construction of new internal access roads providing separate ingress and egress for light and heavy vehicles
- construction of wash bay area, office building pad site, container repair workshop pad site, transport repair workshop pad site and associated utility service connections
- construction of staff and visitor light vehicle parking bays, pathways between car park and office building site, signage and landscaping
- construction of utility services, including drainage, environmental bio-retention basin, retaining wall, potable water and fire water, power, data, security and sewerage
- realignment of Sydney Trains and Endeavour Energy high voltage overhead power line at southern end of the site
- establishment of an electrical transformer
- design and installation of a detection system at the Forrester Road entry/exit
- installation of fuel storage tank and area.

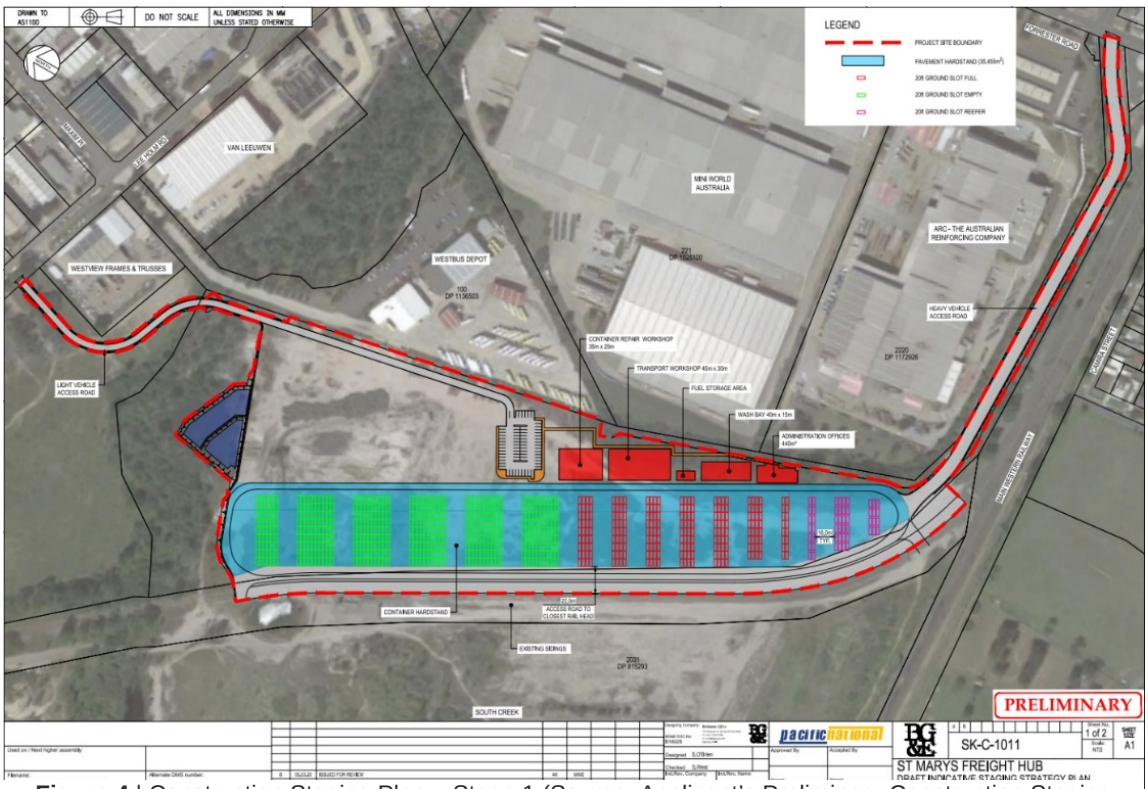


Figure 4 | Construction Staging Plan – Stage 1 (Source: Applicant's Preliminary Construction Staging Strategy)

Stage 2

Construction of the empty container park hardstand area located in the northern section of the site.

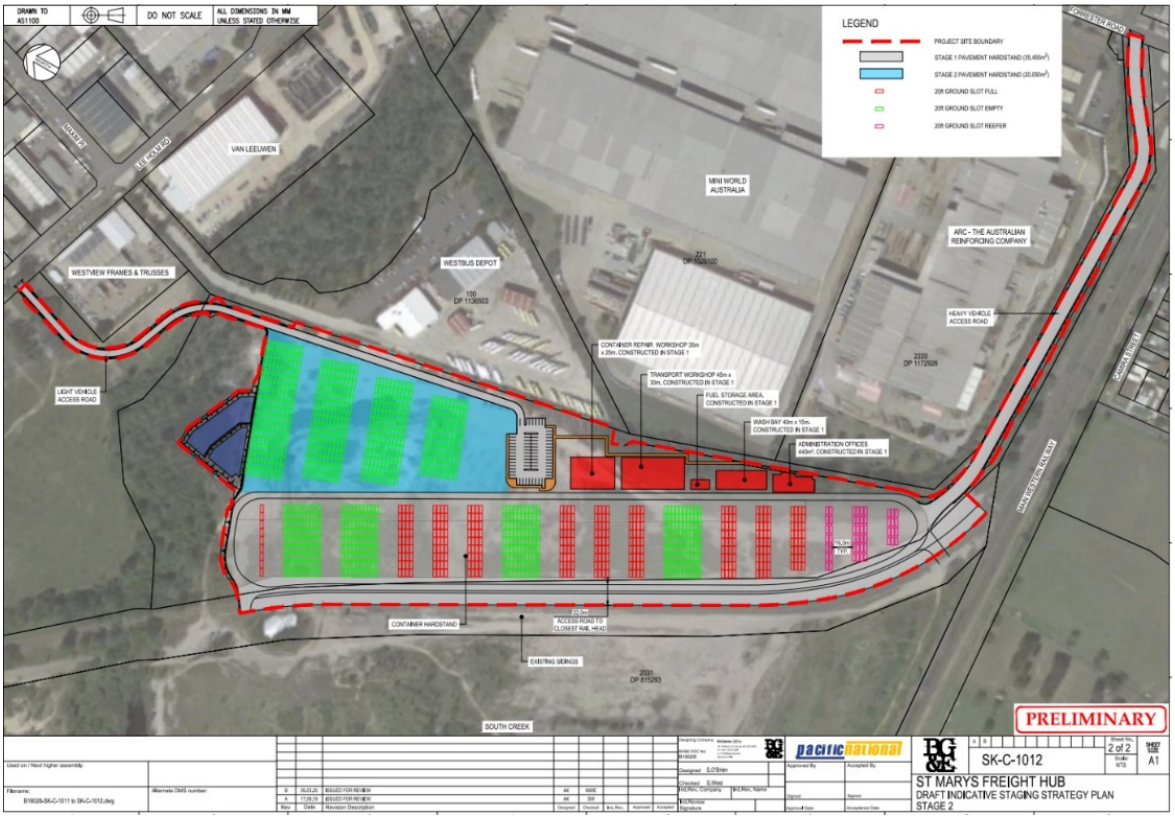


Figure 5 | Construction Staging Plan – Stage 2 (Source: Applicant's Preliminary Construction Staging Strategy)

The Applicant advised the duration of construction works would be approximately 7 months.

A summary of the construction program for the proposal is provided in the Applicant's RtS and shown in **Table 3** below.

Table 3 | Indicative construction staging

	Month							
Description	0	1	2	3	4	5	6	7
Pre-site works commencing								
Construction of heavy vehicle access road, bulk earthworks and hard stand areas								
Construction of light vehicle access road and associated parking								
Construction of building and infrastructure pad sites and fuel storage and wash bay areas								
Finishing works including landscaping, lighting, fencing and signage								

The standard construction work hours for the proposal are:

- 7 am to 6 pm Monday to Friday
- 8 am to 1 pm Saturday
- no work on Sundays or public holidays.

Extended work hours

In addition to the standard construction work hours, the Applicant initially proposed an extended hours work schedule as part of the RtS, however the Department notes the Applicant has withdrawn its request for extended work hours. Consequently, the Department has not considered extended work hours for this proposal.

2.3 Operations of the site

The proposal seeks an operation limit of 301,000 TEU (freight container) annual throughput. It is estimated that a maximum of 436 heavy vehicle movements per day would be generated during operation (i.e. 218 in and 218 out per day). The facility is proposed to operate 24 hours per day, 7 days per week, with 80% of heavy vehicle movements to occur between 6am to 6pm. In regard to unloading and loading trains, the majority of these activities would occur between 5am to 10pm.

The Applicant currently holds five (5) train paths per day for the St Marys facility. It is understood, based on the Train Plan submitted with the EIS, that these paths differ across the week and would range across the day and night to avoid peak times dedicated to passenger services. It is predicted that up to 5 trains per day (35 trains per week) would arrive at the facility, with each train having a maximum capacity of 87 TEUs and maximum train length of 600 m. A maximum capacity of 87 TEUs per train (with 5 trains per day) would equal 435 TEUs inbound by rail per day, at 100% utilisation. Once loaded, the train trip from Port Botany to the facility is around 1.5 hours and it takes around 4 hours to unload a train using three reach stackers.

TEUs may remain on site for up to 48 hours before being transported to their final destination (eg. Marsden Park, Eastern Creek, Erskine Park and Wetherill Park, among others). Freight within the facility is import only and there is no export or unpacking of freight at the facility.

The Applicant's projected import container growth during operations are:

- Year 1 = 75,000 TEUs
- Year 2 = 100,000 TEUs
- Year 3 onwards = 110,000 to 150,500 TEUs.

3. Strategic Context

The NSW Government is committed to increasing the share of containerised freight moved throughout Sydney by rail. The St Marys Intermodal seeks to move 301,000 TEUs annually between Port Botany and St Marys, which the Applicant states is equivalent to removing 8.7 million truck kilometres travelled per year from Sydney's regional and state road networks.

Freight containers would be unloaded and stacked within the facility until they are transported by trucks to distribution centres at Erskine Park, Eastern Creek, Wetherill Park, Arndell Park and Marsden Park. These distribution centres are generally within 20kms of the proposal site. In addition to servicing these distribution centres, the Main Western Railway line (adjoining the subject site), provides freight rail connections between Sydney, regional NSW and interstate freight rail lines connecting to South Australia, the Northern Territory and Western Australia.

The Department considers that the proposal is appropriate for the site given it is consistent with the:

- *Future Transport Strategy 2056* (TfNSW, 2018), which emphasises the need for safe, efficient and sustainable movement of freight, and sets a series of future directions for investigation, including to expand intermodal rail capacity in western Sydney. The subsequent *NSW Freight and Ports Plan* (TfNSW, 2018), concluded that intermodal terminals within Greater Sydney are 'critical for increasing the utilisation of the rail freight network, particularly freight containers to and from Port Botany'.
- Greater Sydney Commission's *A Metropolis of Three Cities - The Greater Sydney Regional Plan* (2018), aims to facilitate a freight and logistics network that is competitive and efficient. The Plan notes that freight volumes are forecast 'to almost double in the next 40 years' and 'increasing importance [is being] placed on 24/7 supply chain operations to maintain Greater Sydney's global competitiveness'.
- Greater Sydney Commission's *Western District Plan*, as St Marys is identified as a 'Strategic centre' within the 'Western Sydney District industrial and urban services land and freight assets'.
- NSW State Priorities, as it would improve road travel reliability and increase business development.
- *State Infrastructure Strategy 2018 – 2038,* as it uses existing infrastructure and will aid in addressing congestion issues on key arterial roads, enabling the efficient distribution of containers to and from Port Botany.

The proposal would provide direct investment in the region of approximately $33,212,000, which would support 60 construction jobs and 168 new operational jobs.

4. Statutory Context

4.1 State Significant Development

The proposal is SSD under section 4.36 (development declared SSD) of the EP&A Act as the development has a CIV in excess of $30 million and:

- comprises a railway freight terminal, siding and inter-modal facility, which is identified as SSD under clause 19(1) of Schedule 1 of the SRD SEPP; and
- is associated with railway infrastructure for the purpose of container packing, storage or examination facilities, which is identified as SSD under clause 19(2) of Schedule 1 of the SRD SEPP.

The Minister for Planning and Public Spaces is the consent authority for the application under section 4.5(a) of the EP&A Act. However, under the Minister's delegation dated 9 March 2020, the Executive Director, Infrastructure Assessments, may determine the application under delegation as the relevant local council has not made an objection, there are less than 50 public submissions in the nature of objection and a political disclosure statement has not been made.

4.2 Permissibility

The site is identified as being located within the IN1 General Industrial zone by the *Penrith Local Environmental Plan 2010* (Penrith LEP). Freight transport facilities are permissible with consent within the zone. Therefore, the Minister for Planning and Public Spaces or a delegate may determine the carrying out of the development.

4.3 Other Approvals

Under section 4.41 of the EP&A Act, a number of other approvals are integrated into the State significant development approval process, and consequently are not required to be separately obtained for the proposal.

In addition, under section 4.42 of the EP&A Act, a number of further approvals are required, but must be substantially consistent with any development consent for the proposal (e.g. approvals for any works under the *Roads Act 1993*).

The Environment Protection Authority (EPA) advised the development would not constitute an activity under the *Protection of the Environment Operations Act 1997* (POEO Act), therefore an Environmental Protection Licence (EPL) would not be required.

The Department has consulted with the relevant public authorities responsible for integrated and other approvals, considered their advice in its assessment of the project, and included suitable conditions in the recommended conditions of consent (see **Appendix C**).

4.4 Mandatory Matters for Consideration

4.4.1 Environmental planning instruments

Under section 4.15 of the EP&A Act, the consent authority is required to consider any environmental planning instrument (EPI) that is of relevance to the development application. Therefore, the assessment report must include a copy of, or reference to, the provisions of any EPIs that substantially govern the project and that have been taken into account in the assessment.

The Department has undertaken a detailed assessment of these EPIs in **Appendix B** and is satisfied the application is consistent with the requirements of the EPIs.

4.4.2 Objects of the EP&A Act

The objects of the EP&A Act are the underpinning principles upon which the assessment is conducted. The statutory powers in the EP&A Act (such as the power to grant consent/approval) are to be understood as powers to advance the objects of the legislation, and limits on those powers are set by reference to those objects. Therefore, in making an assessment, the objects should be considered to the extent they are relevant. A response to the objects of the EP&A Act is provided at **Table 4**.

Table 4 | Response to the objects of section 1.3 of the EP&A Act

Objects of the EP&A Act	Consideration
(a) to promote the social and economic welfare of the community and a better environment by the proper management, development and conservation of the State's natural and other resources	The proposal provides for an intermodal facility in a strategically important location within Western Sydney. The proposal would facilitate a mode-shift of the transportation of freight from road to rail-based, provide increased productivity and capacity of the freight network and relieve pressure on roads around Port Botany. Impacts on traffic and noise arising from the proposal can be appropriately managed and mitigated.
(b) to facilitate ecologically sustainable development by integrating relevant economic, environmental and social considerations in decision-making about environmental planning and assessment,	The proposal includes measures to deliver ecologically sustainable development (ESD) (**Section 4.4.3**).
(c) to promote the orderly and economic use and development of land,	The site is identified as an intermodal site of strategic importance in government policy and the proposal is therefore consistent with the strategic vision for the site. The proposal would improve freight logistics within Sydney and would therefore have significant positive economic impacts.
(d) to promote the delivery and maintenance of affordable housing,	Not applicable.
(e) to protect the environment, including the conservation of threatened and other species of native animals and plants, ecological communities and their habitats,	The proposal includes the clearing of existing native vegetation, including threatened ecological communities and other habitat for native species. To compensate for these actions, the proposal commits to retiring a total of 15 ecosystem credits and 19 species credits to offset the residual impacts of the proposal.

(f)	to promote the sustainable management of built and cultural heritage (including Aboriginal cultural heritage),	**Section 6** of this report considers the proposal's impacts on heritage items.
(g)	to promote good design and amenity of the built environment,	**Section 6** of this report considers the proposal's impacts on design and amenity.
(h)	to promote the proper construction and maintenance of buildings, including the protection of the health and safety of their occupants,	**Section 6** of this report considers the proposal's impacts on built form.
(i)	to promote the sharing of the responsibility for environmental planning and assessment between the different levels of government in the State,	The Department publicly exhibited the proposal (**Section 5.1**), which included consultation with Council and other public authorities and consideration of their responses (**Section 5.1** and **Section 6**).
(j)	to provide increased opportunity for community participation in environmental planning and assessment.	The Department publicly exhibited the proposal as outlined in **Section 5.1**, which included notifying adjoining landowners, placing a notice in newspapers and displaying the proposal on the Department's website and at Council during the exhibition period.

4.4.3 Ecologically sustainable development

The EP&A Act adopts the definition of ESD found in the *Protection of the Environment Administration Act 1991*. Section 6(2) of that Act states that ESD requires the effective integration of economic and environmental considerations in decision-making processes and that ESD can be achieved through the implementation of:

- the precautionary principle
- inter-generational equity
- conservation of biological diversity and ecological integrity
- improved valuation, pricing and incentive mechanisms.

The development proposes ESD initiatives and sustainability measures, including:

- water re-use, including a 25kL tank to capture rainwater runoff from the proposed office building (to be reused for toilet flushing), and a 100kL tank to capture rainwater runoff from the proposed transport and container repair workshops (to be reused in the proposed wash bay)
- water sensitive urban design initiatives, including use of stormwater treatment systems to limit the amount of gross pollutants, sediments, nutrients and hydrocarbons discharging to downstream waterways. Hardstand areas would drain to a combined sediment, bio-retention and attenuation basin and gross pollutant inserts (Enviropods) would be used to capture pollutants in pits on the Lee Holm Road access road
- implementation of measures to minimise the consumption of fuel, oil and on-site electricity usage, including consideration of energy efficient and renewable options for vehicle and plant equipment.

The Department has considered the proposed development in relation to the ESD principles. The precautionary and inter-generational equity principles have been applied in the decision making process via a thorough and rigorous assessment of the environmental impacts of the proposed development.

Overall, acknowledging initiatives and sustainability measures noted above, and for the reasons discussed in **Section 6** and the recommended conditions proposed by the Department, the proposal is consistent with ESD principles and the Department is satisfied the proposed sustainability initiatives will encourage ESD, in accordance with the objects of the EP&A Act.

4.4.4 Environmental Planning and Assessment Regulation 2000

Subject to any other references to compliance with the EP&A Regulation cited in this report, the requirements for Notification (Part 6, Division 6) and Fees (Part 15, Division 1AA) have been complied with.

4.4.5 Planning Secretary's Environmental Assessment Requirements

The EIS is compliant with the Planning Secretary's Environmental Assessment Requirements (SEARs) and, together with the RtS and supplementary information provided, is sufficient to enable an adequate consideration and assessment of the proposal for determination purposes.

4.4.6 Section 4.15(1) matters for consideration

Table 5 identifies the matters for consideration under section 4.15 of the EP&A Act that apply to SSD in accordance with section 4.40 of the EP&A Act. The table represents a summary for which additional information and consideration is provided for in **Section 6** (Assessment) and relevant appendices or other sections of this report and EIS, referenced in the table.

Table 5 | Section 4.15(1) matters for consideration

Section 4.15(1) Evaluation	Consideration
(a)(i) any environmental planning instrument	The Department's consideration of the relevant EPIs is provided in **Appendix B**.
(a)(ii) any proposed instrument	Not applicable.
(a)(iii) any development control plan (DCP)	Under clause 11 of the SRD SEPP, DCPs do not apply to SSD.
(a)(iiia) any planning agreement	Not applicable.
(a)(iv) the regulations *Refer Division 8 of the EP&A Regulation*	The application satisfactorily meets the relevant requirements of the EP&A Regulation, including the procedures relating to applications (Part 6 of the EP&A Regulation), public participation procedures for SSD and Schedule 2 of the EP&A Regulation relating to EIS.
(a)(v) any coastal zone management plan	Not applicable.
(b) the likely impacts of that development including environmental impacts on both the natural and built environments, and social and economic impacts in the locality	Appropriately mitigated or conditioned - refer to **Section 6**.
(c) the suitability of the site for the development	The site is suitable for the development as discussed in **Sections 3, 4** and **6**.
(d) any submissions	Consideration has been given to the submissions received during the exhibition period. See **Section 5** and **Section 6**.

(e) the public interest	Refer to **Section 6** and **Section 7**.

4.4.7 Biodiversity Conservation Act 2016

Under section 7.9(2) of the *Biodiversity Conservation Act 2016* (BC Act), SSD applications are "to be accompanied by a biodiversity development assessment report (BDAR) unless the Planning Agency Head and the Environment Agency Head determine that the proposed development is not likely to have any significant impact on biodiversity values".

The impact of the proposal on biodiversity values has been assessed in the revised BDAR accompanying the RtS and is considered in **Section 6**.

5. Engagement

5.1 Department's Engagement

In accordance with Schedule 1 of the EP&A Act, the Department publicly exhibited the application from Friday 31 May 2019 until Thursday 27 June 2019 (28 days). The application was exhibited at the Department and on its website, at the NSW Service Centre, Council's office, Penrith City Library and St Marys Library.

The Department placed a public exhibition notice in the Penrith Press on Thursday 30 May 2019 and notified adjoining landholders and relevant State and local government authorities in writing. The Department's representatives visited the site to provide an informed assessment of the development.

Following the exhibition, the Department met with Council staff to discuss Council's submission on 5 July 2019. Following this, the Department met with Council staff and representatives of the Applicant at Penrith City Council on 27 August 2019 and 14 February 2020.

The Department has considered the comments raised in the public authority and public submissions during the assessment of the application (**Section 6**) and/or by way of recommended conditions in the instrument of consent at **Appendix C**.

5.2 Summary of Submissions

The Department received a total of 15 submissions, comprising ten submissions from public authorities, two submissions from the general public and three submissions from organisations (including one submission from a neighbouring business). Two organisations objected to the proposal. A summary of the issues raised in the submissions is provided at **Table 6, Table 7** and **Table 8** below and copies of the submissions may be viewed at **Appendix A**.

5.3 Key Issues – Government Agencies

A summary of the issues raised in the public authority submissions is provided at **Table 6** below and copies of the submissions may be viewed at **Appendix A**.

Table 6 | Summary of public authority submissions to the EIS exhibition

Penrith City Council (Council)
Council provided comments on operational traffic impacts to the local road network, which include: • heavy vehicle traffic should be directly connected to the arterial road network and not use local roads • the arterial road network should be upgraded to accommodate the operational traffic volumes • Lee Holm Drive is too narrow to accommodate two-way heavy vehicle movements • heavy vehicles access via Forrester Road is not acceptable due to its proximity to St Marys Station

- no SIDRA assessment of Lee Holm Drive/Christie Street, Christie Street/Forrester Road, Forrester Road/Glossop Street and / Dunheved Road / Christie Street intersections.

Council also provided comments in relation to the following:

- majority of the site will be inundated by the South Creek PMF flooding and by Little Creek flooding
- the proposal should not increase upstream flooding
- demonstrate compliance with the State Government Floodplain Development Manual and Council's Local Environmental Plan and Development Control Plan
- provide MUSIC modeling for review
- a separate development application is required to remediate the site
- detail the process for dewatering and filling in of existing sediment ponds
- construction air quality impacts on surrounding receivers
- the long-term management of stockpiles is not acceptable
- an Unexpected Finds Protocol should be prepared
- storage of tyres on site may require an Environment Protection Licence (EPL)
- no noise assessment has been provided for activities occurring outside standard construction hours or trains entering the site
- operational activities will exceedance of sleep disturbance criteria for residential receivers.

NSW Environment Protection Authority (EPA)

The EPA provided the following advice:

- unclear whether the proposed construction phase stormwater management will be consistent with industry guidelines as limited detail is provided
- demonstrate compliance with the NSW Water Quality Objectives and national water quality guidelines
- clarify the unattended noise monitoring techniques used and provide supplementary night time monitoring data
- all operational scenarios and activities require a noise assessment
- further clarification is required for the management of Lmax noise events during night time activities
- construction activities must be limited to standard construction hours
- the proposal should benchmark its emission against performances against best practice
- revise the air quality impact assessment to:
    - include speciation profile adopted for assessing individual VOCs, with justification
    - assess predicted impacts of other principal air toxics, including polycyclic aromatic hydrocarbons
    - assessment of $PM_{2.5}$ emissions from proposed emission sources
- contaminated material (such as asbestos) must be disposed offsite at EPA approved facilities
- a detailed Remediation Action Plan should be prepared.

Sydney Water

Sydney Water provided the following advice:

- the Applicant should engage a Water Servicing Coordinator to manage the drinking water and wastewater servicing requirements for the proposal.

Airservices Australia

- the proposal at a maximum height of 44.5m (146ft) AHD, will not affect any sector or circling altitude, nor any instrument approach or departure procedure at Westmead HLS, Bankstown Airport or Richmond (NSW) Airport

- the proposal at a maximum height of 44.5m (146ft) AHD, will not adversely impact the performance of Precision/Non-Precision Navigational Aids, HF/VHF Communications, A-SMGCS, Radar, PRM, ADS-B, WAM or Satellite/Links.

New South Wales Rural Fire Service (NSW RFS)

RFS advised it has no specific recommendations in relation to bush fire protection.

Endeavour Energy

Endeavour Energy provided technical guidelines and support material, in addition to the following advice:

- the local substation may have spare capacity for this proposal
- a new power cable may be required from the substation to the proposed site
- the applicant is encouraged to engage an Electrical Consultant prior to finalising plans.

Environment, Energy and Science Group (EES)

EES Group provided the following advice:

- further clarification is required that the wetland (onsite) is not a remnant or naturally occurring wetland
- further clarification is needed on whether *Grevillea juniperina* ssp*. juniperina* is located on site
- justification for mapping of the Myotis macropus species polygon is required
- future landscaping on site should be based on species associated with the local Plant Community Type.

Department of Planning, Industry and Environment - Crown Lands, Water and Primary Industries

DPIE – Crown Lands, Water and Primary Industries provided the following advice:

- a detailed site water balance during construction and operation must be provided
- works on waterfront land should be carried out in accordance with the Guidelines for Controlled Activities (2012)
- maintain existing monitoring bore network and include additional bores for future monitoring
- seeks further information on the management of erosion and sedimentation during construction and operation.

Transport for NSW (TfNSW)

TfNSW provided the following advice:

- all parties should continually work together to minimise impacts to the corridors of the proposed future Outer Sydney Orbital and North South Rail Line
- undertake a sensitivity analysis on the traffic generation calculations based on less than 100% back-loading rate of trains
- undertake a noise assessment of brake squeal, wagon bunching and curve squeal
- operational noise mitigation
- provide LAeq(period) and LAFmax noise contour data.

Transport for NSW (Roads and Maritime Services) (TfNSW(RMS))

TfNSW(RMS) had no objections to the proposal.

5.4 Key Issues – Community/Organisations

5.4.1 Public submissions

A summary of the issues raised in the public submissions is provided at **Table 7** below and copies of the submissions may be viewed at **Appendix A**.

Table 7 | Summary of the public submissions to the proposal

Issue
Lee Holm Rd is not wide enough to accommodate large volumes of heavy vehicles
Heavy vehicles should exit the site from Forrester Rd
Overhead power lines along Lee Holm Rd near the entry / exit location, which seem too low and require a major upgrade
Entry / exit to the site should be along an existing access point at Christie St.

5.4.2 Organisations

A summary of issues raised by special interest groups is provided at **Table 8** below and copies of the submissions may be viewed at **Appendix A**.

Table 8 | Summary of the interest groups and business submissions

Blacktown & District Environment Group Inc.
Object to registering to provide a submission
Net loss of remnants of ecological communities
Direct / indirect impacts to the wetland along the northern boundary
All drains on site should drain to in-site storage areas
Charter Hall
Dust generated during the construction
Construction traffic impacts
Lack of consideration to human discomfort impacts during the use of vibration-intensive equipment during construction works
Increased flooding impacts to adjoining landowners
Suitability of locating a Dangerous Goods store so close to the Charter Hall site
NSW Ports
NSW Ports provided the following advice: • the proposal will aid in achieving NSW Ports target of the three million TEU per year by rail • the proposal will aid efficient movement of containers by rail to warehouses in the Western Sydney region. NSW Ports also provided context to the proposal, including the need to protect corridors for future projects such as the Western Sydney Freight line and the Outer Sydney Orbital.

5.5 Response to Submissions

Following exhibition, all submissions were made available on the Department's website. The Department requested the Applicant provide a response to the issues raised in the submissions.

On 4 October 2019, the Applicant provided a Response to Submissions (RtS) (**Appendix A**), which included the following amendments to the proposal:

- revised site layout of the development footprint, including:
    - light vehicle access from Lee Holm Road (previously from Forrester Road)
    - heavy vehicle access from Forrester Road (previously from Lee Holm Road)
    - provision for two B Double vehicles to wait on site prior to exiting to Forrester Road, to allow oncoming traffic to enter the site under CCTV and stop sign control
    - staff and visitor parking relocated to co-locate with operational and administrative buildings
    - relocation of the fuel storage facility to abut operational buildings
    - relocation of the administrative office building, away from operational buildings
    - construction of a noise wall along the southern boundary of the internal heavy vehicle access road to Forrester Road
- revised route for heavy vehicle movements (known as Option 4) — refer to **Section 6.1** for further details).
- implementation of reach stacker soft landing technology to reduce noise associated with container stacking loading/unloading
- revised stormwater management design
- preparation and implementation of a dewatering plan for the dam at the northern boundary of the development site.

The RtS was made publicly available on the Department's website and referred to the relevant public authorities. An additional four submissions were received from public authorities. A summary of issues raised in submissions is provided at **Table 9** and copies of the submissions may be viewed at **Appendix A**.

Table 9 | Summary of the public authority submissions to the RtS.

Penrith City Council
Penrith City Council provided the following additional advice: • the assessment significantly underestimates the truck movements and impacts on the road network including the intersections of Forrester Road / Glossop Street, Glossop Street / Great Western Highway and Great Western Highway / Mamre Road • truck generation and proposed access route places undue pressure and burden on the local road network and intersections within built-up residential areas on Forrester Road and Glossop Street as well as on the RMS road network and intersections on the Great Western Highway and Mamre Road • all heavy truck movements should be directly connected to the arterial road network. The arterial road network and connections should be upgraded to accommodate the increased heavy vehicle traffic

- any connections to Christie Street should include upgrading of Christie Street and connections to Dunheved Road, provision of Werrington Arterial Stage 2 (to be constructed by RMS/ TfNSW), upgrading Forrester Road and provision for connections to the proposed Outer Sydney Orbital
- the Traffic and Transport Assessment has not revised the truck generation from the previously exhibited St Marys Intermodal Terminal Traffic Report
- the local road network is not suitable for additional heavy vehicle traffic generated by the proposal and all the existing intersections along the Option 4 route have unacceptable intersection average levels of service and any identified improvements to intersections would continue to have unacceptable movement levels of service, delays and unacceptable movement queue lengths
- no detail on the amount of water for non-potable demand has been provided
- additional details will need to be provided including vegetation, filter media specification and the like
- an Operation and Maintenance Manual will need to be prepared and be implemented in perpetuity
- additional details on the design of treatment measures is required
- ensure that early consultation occur with all affected property owners
- consider the larger aspect of site management to ensure that site activities do not encroach beyond the developed area on to land that has not been investigated
- provision of long term site management controls
- The RAP proposes the on-site containment of contaminated material. Should this remedial option be undertaken, it is requested that the Department require a NSW EPA Accredited Site Auditor to be appointed to issue a Site Audit Report and Statement for the site
- all remedial works to be supervised by an appropriately qualified person/environmental consultant.

NSW Environment Protection Authority (EPA)

The EPA provided the following additional advice:

- outline the process used to determine feasible and reasonable mitigation consistent with the *Noise Policy for Industry* (EPA, 2017) Section 3.4 and Fact Sheet C
- the single assessed operational scenario may not represent the potential operation configurations of the premises
- provide predicted noise levels at each of the affected receivers
- provide an assessment of the proposed 50 containers with noise producing refrigerated plant located at the closest container storage area to the receivers
- provide an assessment of modifying factors using NPfl Fact Sheet C which includes an assessment of tonal, low frequency and intermittent noise
- the EPA would expect that any path or receiver mitigation is implemented, where practical, prior to the main construction activities occurring to provide a benefit during construction as well as operations
- consider the investigation of a noise barrier located to the south of the rail corridor along Camira Street in consultation with the Applicant and the rail infrastructure manager
- demonstrate that all reasonable and feasible mitigation measures have been considered prior to specifying treatment at residential properties
- present the predicted ground level concentrations for PM2.5, PM10 and NO2 at nearest sensitive receptors
- noted the AQIA predicted significant annual average PM2.5 ground level concentration increments
- demonstrate that the project is adopting all reasonable and feasible best practice mitigation measures to reduce PM2.5 emissions and reduce PM2.5 project contributions.

Transport for NSW (TfNSW)

TfNSW provided the following additional comments and advice:

- continue to liaise with the Department to minimise the impact of the development on the proposed transport corridors

• Werrington Arterial Road Stage 2 development is not included in TfNSW's current programs and no funding is allocated at this stage • there is no expectation that a full container will be delivered back to the site, or that trucks would leave empty • a monitoring and performance management regime is to be established for all terminal and rail operations. • all modelled intersection cycle lengths are to be updated to be consistent with the maximum cycle lengths • SIDRA modelling files are to be provide for analysis after consistent phase times are applied • the proposed access on Forrester Road extending into the adjoining property frontage cannot be supported by TfNSW until evidence of consent from the adjoining property owner has been obtained • treatments are to be investigated that allow for through movements whilst a heavy vehicle is waiting to undertake a right turn on the site • consider providing safe pedestrian access to the station entrance away from heavy vehicle movements • consider reducing truck movements during school pick up/drop off times.
Environment, Energy and Science Group (EES)
EES Group recommended the preparation of a vegetation management plan, to protect retained vegetation, and indicated all other issues previously raised EES Group have been adequately addressed.

5.6 Supplementary information

The Department made a series of requests for additional information between December 2019 and April 2020, to provide clarification and inform its assessment following agency submissions on the RtS. Supplementary information provided by the Applicant addressed concerns with regard to heavy vehicle access and routes, extended construction work hours, staging of construction, location of proposed noise wall and additional noise modelling.

The Applicant submitted a Heavy Vehicle and Transport Analysis in January 2020. The Heavy Vehicle and Transport Analysis included preparation of a Road Safety Audit to examine impacts on road safety resulting from the proposed use of Forrester Road, south of Glossop Street, via the proposed heavy vehicle access route. The report also provided an analysis of alternate feasible heavy vehicle access routes, to demonstrate how different aspects of amenity have been considered. The Applicant considered Option 4 as the optimal truck route for the proposal and further detail on the submitted Heavy Vehicle and Transport Analysis is provided in **Section 6.1**.

On 11 February 2020, the Applicant provided further supplementary information responding to comments provided by the Department, Council, EPA and TfNSW on the RtS. This included an updated Noise and Vibration Impact Assessment (NVIA) in response to noise related comments provided by the EPA. In particular, the updated NVIA included further evaluation of noise related mitigation measures, construction of a 2.4 m noise barrier along the Forrester Road access and provided a noise assessment for 50 refrigerated containers.

On 27 March 2020, the Department requested the Applicant undertake additional investigation and modelling in regard to the location of a noise barrier on the southern side of the rail corridor. Consequently, the Applicant provided a sensitivity analysis including modelling of a noise barrier at various heights along the southern boundary of the rail corridor. Further details on the outcome of supplementary information provided is included in **Section 6.**

6. Assessment

The Department has considered the EIS, the issues raised in submissions and the Applicant's RtS and supplementary information in its assessment of the proposal. The Department considers the key issues associated with the proposal are:

- Traffic, access and parking
- Noise
- Contamination
- Biodiversity
- Stormwater, drainage and flooding.

Each of these issues is discussed below. Other issues taken into consideration during the assessment of the application are discussed at **Section 6.6**.

6.1 Traffic, access and parking

The proposal involves the arrival, unloading, and departure of up to five trains a day, and vehicle access to and from the site during construction and operational phases.

The site would be accessed primarily along state or regional roads, between the site and the Great Western Highway, that are approved as B-double access routes. However, vehicles would enter the site via a local road section of Forrester Road south of Glossop Street, and via an access point to be constructed on Lee Holm Road in the industrial precinct to the north of the site. The road network surrounding the proposal is shown in **Figure 6**.

Figure 6 | Road network around the proposal (Source: EIS)

6.1.1 Construction Traffic

The Applicant assessed traffic impacts associated with material delivery for construction of the site hardstand area. The qualitative assessment identified construction impacts associated with the transport of quarried materials, road base and bitumen for the hardstand area, building materials and materials for the proposed stormwater and drainage system, with up to 100-140 movements to site per day to be spread across the day (that is, up to between 10-14 return movements per hour). Overall, the assessment assumes up to 4,500 truck movements will be required across five months of the construction period (as described in **Section 2.2**)

Overall, the Applicant's assessment asserts that predicted traffic volumes can be catered for within the existing capacity of the road network without the need for intersection upgrades. However, the Applicant assumed that extended daily construction hours would be permitted to allow night-time delivery of materials — this out-of-hours work has not been recommended for approval (see **Section 2.2**).

As such, the Department considers that construction traffic must be actively managed through the implementation of a detailed and adaptive construction traffic and pedestrian management plan. The Department considers that a detailed construction traffic and pedestrian management plan would be capable of setting out sufficient controls to manage construction-phase traffic impacts. It is recommended that this plan be approved by the Planning Secretary before the commencement of construction. Given the importance of controlling impacts of heavy vehicle movements, the Department has recommended the plan set out and seek approval for:

- measures to ensure road safety and network efficiency during construction
- controls to reduce any potential impacts on general traffic, cyclists and pedestrians and bus services
- heavy vehicle routes, access and parking arrangements.

The Department also recommends a condition that the Applicant provide sufficient on-site construction parking to ensure staff do not park on local roads or car parks.

Consistent with the Department's practice in regulating industrial development of similar scale, the Department has also recommended the Applicant implement a Driver Code of Conduct, to ensure drivers access the routes agreed in the construction traffic and pedestrian management and re-emphasise the importance of safe driving throughout construction.

The Department considers that, with the active and adaptive implementation of an approved construction traffic and pedestrian management plan, construction traffic can be managed appropriately.

6.1.2 Operational heavy vehicle access and haulage routes

The Applicant seeks approval for a split road access arrangement to the site during operations, with heavy vehicle access via the access point at Forrester Street (which would be upgraded as set out below) and light vehicle access via the site access at Lee Holm Road, connected to the site by a new

internal access road. These proposed access arrangements to the site have changed during the assessment of the proposal — essentially the original exhibited proposal for heavy vehicle access via Lee Holm Road and light vehicle access via Forrester Road has reversed.

Council raised strong concerns about the Applicant's proposed access routes to the site, primarily around the road safety and amenity impacts of access via local roads, predominately residential streets. Concern was also raised regarding the suitability of narrow sections of Lee Holm Road for inbound and outbound traffic generated by the proposal, and the potential for conflicts between vehicles entering and leaving via the proposed Forrester Road access point with pedestrians accessing St Marys Station.

The Department considers that the acceptability of the access to and from the site is a key matter for determination of the application, including:

- acceptability of amenity impacts associated with the proposed access routes
- road safety outcomes associated with heavy vehicles use of Forrester Road.

To assist in determining the acceptability of the proposed site routes, the Department requested the Applicant further outline its analysis of all feasible alternative heavy vehicle access routes. The request sought consideration of:

- day and night-time noise
- traffic and transport access
- impacts to road user safety and conflicts with public transport uses
- impacts to sensitive land uses such as schools, health facilities and recreation areas.

Further to this request, the Department asked the Applicant to provide a road safety audit for use of Forrester Road south of the intersection with Glossop Street. The purpose of the audit was to examine safety issues associated with access to the site in proximity to kiss-and-ride, public transport stops and the commuter car park on the northern side of the St Marys Railway Station precinct.

The Applicant's response identified four potential key transport routes that had been considered, as detailed in **Table 10** and shown in **Figure 7** below.

Table 10 | Applicant's route options

Route option	Access route	Access point
Route Option 1	Lee Holm Road, Christie Street, Forrester Road and Glossop Street	Lee Holm Road
Route Option 2	Lee Holm Road, Christie Street and Werrington Road	Lee Holm Road
Route Option 3	Forrester Road, Harris Street, and Glossop Street	Forrester Road
Route Option 4	Forrester Road and Glossop Street	Forrester Road

Applicant's preferred option		
Night time alternative option	Lee Holm Road, Christie Street, and Werrington Road	Lee Holm Road

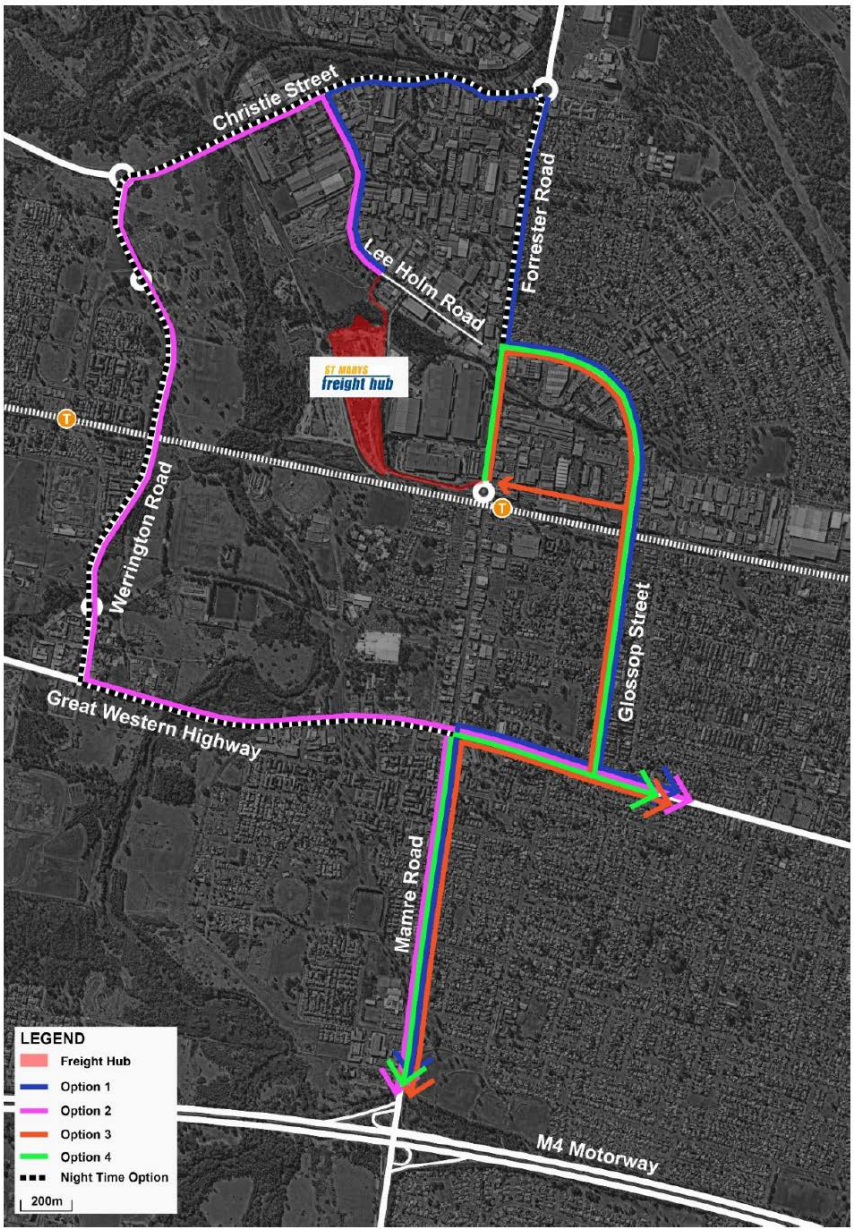


Figure 7 | Applicant's Route Options (Source: Heavy Vehicle & Transport Analysis: Summary Report)

The Applicant's analysis identified Option 4 as the recommended access route to the site, based on a multi-criteria analysis considering route length, travel time to the M4, traffic capacity, traffic safety and amenity impacts. In forming this view, the Applicant asserts:

- Option 4 would require the fewest vehicle kilometres travelled and shortest travel time from M4
- Option 4 affects a fewer number of key intersections, i.e. traffic 'conflict points'
- Option 2 and the night time option would travel past the fewest residential receivers.

Option 4 and likely traffic distribution from the site to nearby industrial lands is shown in **Figure 8** below.

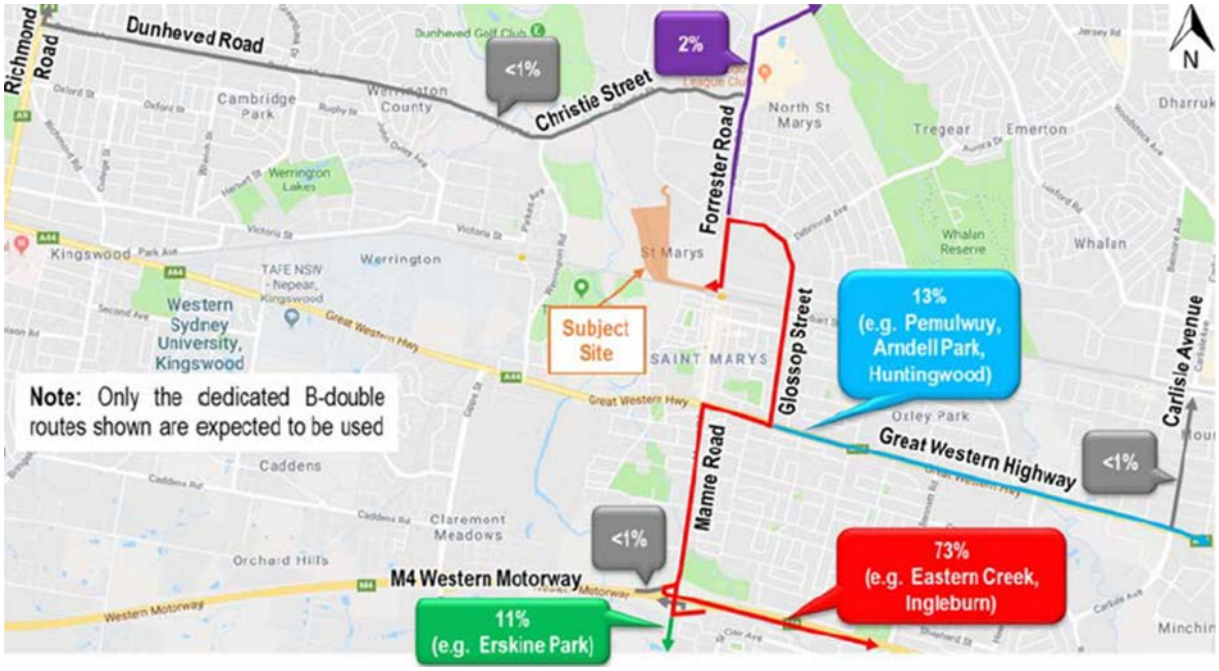


Figure 8 | Option 4 route (in red) and indicative distribution destinations (Source: *St Marys Freight Hub Traffic and Transport Assessment Post Exhibition Version* (Bitzios Consulting 2019))

The Department has considered closely the proposed heavy vehicle route analysis provided, and considers that Option 4 is acceptable because the:

- predicted level of service at key intersections would remain within acceptable bounds, having regard to the degree of conservatism inherent in the model and concerns raised about the predicted traffic numbers (see **Section 6.1.4** below)
- proposed access routes are largely approved for heavy vehicle access, except the area between Glossop Street and the access point
- Applicant's road safety audit proposes several reasonable upgrades at or adjacent to the Forrester Road site access that would address residual concerns with heavy vehicles in that area, including:
    - reconfiguration of neighbouring signage and street lighting affecting sight lines
    - changes to fencing around the access to enhance visibility
    - widening of the access point to facilitate swept paths
    - provision of signage for pedestrians and cyclists
    - a detection system to identify and avoid conflict between vehicle movements and pedestrian and cyclists.
- the Department has recommended conditions that would address road dilapidation and other safety matters associated with access.

The Department considered the analysis, including the findings of the road safety audit, and has recommended a series of conditions to ensure the safe operation of the Forrester Road access. These recommendations include a series of design conditions that must be satisfied in the detailed

design of the access. These requirements were developed with regard to Council concerns, and include requirements for:

- design plans to the satisfaction of the relevant roads authority which demonstrate that the proposed accesses to the development are designed to accommodate the turning paths identified in the Road Safety Audit
- maintaining required sight lines around the driveway entrances and exits
- ensuring the 'swept path' of the longest construction vehicle entering and exiting the site is in accordance with the relevant Australian standard
- accommodating all heavy vehicles associated with the operation of the intermodal terminal on site in the event of an incident blocking access to Forrester Road/ Glossop Street/ Great Western Highway — to avoid queuing on public roads
- all vehicles to only enter and leave the site in a forward direction, and be fully inside the site before being required to stop
- the safety of vehicles and pedestrians accessing adjoining properties, where shared vehicle pedestrian access occurs, is to be addressed.

These design requirements must be detailed in final plans for the site, and prepared in consultation with TfNSW prior to operation.

The Department's consideration of the operational traffic associated with the proposed route is detailed in **Section 6.1.4** below.

6.1.3 Direct access to the arterial network

The Department acknowledges Council's position that the proposal would benefit from direct connection to the arterial road network, and notes Council's assertion that any use of Christie Street should connect to Werrington Arterial Road Stage 2, which would extend the completed Stage 1 works on Gipps Road onwards to the north of the Great Western Highway, and provide more direct access from the M4 Motorway to industrial lands surrounding the site. Given delivery of the Werrington Arterial Stage 2 would provide a more direct access site to the site, the Department requested advice from TfNSW-RMS, following exhibition, on the status of plans for the upgrade. In response, TfNSW-RMS advised that Werrington Arterial Road Stage 2 development is not included in TfNSW's current programs and no funding is allocated at this stage. Due to the aspirational timing of this future upgrade, the Department has finalised its recommendation based on the existing road network, noting that use of Christie Street is not part of the preferred Option 4 route.

6.1.4 Operational traffic

The Applicant's operational traffic impact predictions are contingent on the proposed five daily train paths from Port Botany. The Applicant has conducted modelling based on assumptions that the proposal would generate a daily maximum of 436 heavy vehicle movements during operation, comprising 218 entry and 218 exit movements. The assumptions are quantified as:

- 87 TEUs per train, based on 600m train length
- 435 TEU per day, based on five trains entering the site

- 218 movements (2 TEU per truck) leaving the site per day.

The Applicant's predicted impacts at key intersections are based on modelling derived from the assumed movements. The predicted intersection performance at Forrester Road/Glossop Street, closest to the proposed heavy vehicle access point, is detailed in **Table 11**. For eight key intersections along regional roads include a 20% uplift in movements to and from the site based on advice from TfNSW-RMS to build conservatism into the traffic predictions. The predictions consider both a '2030 no-project' scenario and the 'with-project + 20%' case, and are summarised in **Table 12**.

Table 11 | Forrester Road/Glossop Street predicted intersection performance

	AM Peak						PM Peak					
Intersection	2018/2019 Base Case		2030 Base Case (with upgrades)		2030 With Development		2018/2019 Base Case		2030 Base Case (with upgrades)		2030 With Development	
	Average delay (s/ vehicle)	LoS	Average delay (s/ vehicle)	LoS	Average delay (s/ vehicle)	LoS	Average delay (s/ vehicle)	LoS	Average delay (s/ vehicle)	LoS	Average delay (s/ vehicle)	LoS
Forrester Road/ Glossop Street	27	B	23	B	26	B	27	B	31	C	34	C

Source: *St Marys Freight Hub Traffic and Transport Assessment Post Exhibition Version* (Bitzios Consulting 2019) Tables 4.3 4.6 and 4.10

Table 12 | Predicted intersection performance

	AM Peak						PM Peak					
Intersection	2018 Base Case		2030 Base Case		2030 With Development + 20%		2018 Base Case		2030 Base Case		2030 With Development + 20%	
	Average delay (s/ vehicle)	LoS	Average delay (s/ vehicle)	LoS	Average delay (s/ vehicle)	LoS	Average delay (s/ vehicle)	LoS	Average delay (s/ vehicle)	LoS	Average delay (s/ vehicle)	LoS
Richmond Road/ Dunheved Road	21	B	27	B	Not a heavy vehicle route for the development		23	B	37	C	Not a heavy vehicle route for the development	
Great Western Highway/Parker Street	47	D	81	F			44	D	67	E		
Great Western Highway/ Werrington Road/ Reserve Road	44	D	77	F			48	D	56	D		
Great Western Highway/ Queen Street/ Mamre Road	51	D	54	D	56	D	44	D	49	D	54	D
Great Western Highway/ Carlisle Avenue	43	D	44	D	44	D	46	D	46	D	46	D
Mamre Road/M4 Western Motorway (south)	18	B	19	B	20	B	24	B	49	D	55	D
Mamre Road/M4 Western Motorway (north)	26	B	27	B	28	B	27	B	33	C	37	C
Great Western Highway/Glossop Street	35	C	38	C	39	C	31	C	32	C	33	C

Source: *St Marys Freight Hub Traffic and Transport Assessment Post Exhibition Version* (Bitzios Consulting 2019) Table 4.12

In summary, the Applicant's assessment:

- predicts that no intersection would degrade a level of service from the project's traffic contribution
- acknowledges that average queuing delay could be anticipated to increase by 5-6 seconds at the intersections of Great Western Highway/Queen Street/Mamre Road and Mamre Road/M4 Western Motorway (south)
- concludes that intersection level of service are similar in both a with-project and with-project + 20% traffic generation uplift.

In its submissions, Council questioned the predicted traffic generation for the site, and whether the traffic assessment has significantly underestimated the traffic impacts on key intersections. In part, Council raised that the predicted trip generation for this proposal was substantially less per TEU than that predicted for the Moorebank Intermodal (which the Department understands as the predictions in the MPW Concept Proposal EIS).

The Department is prepared to accept the Applicant's trip generation, noting that the trip generation assumptions differ in key ways between the proposal and the Moorebank Intermodal terminal.

During operations of the St Mary Intermodal, containers would enter the site via the port shuttle train service from Port Botany. Containers would be 'stripped' from the trains and, over the course of the next few days, be loaded onto trucks (either semi-trailers or B-doubles) and transported off-site to warehousing across Western Sydney. By comparison, the Moorebank Intermodal operations provide for extensive processing of the container cargo, which includes onsite unpacking and further distribution. That site also includes significant container handling area supported by extensive onsite warehousing to service the rail freight intermodal, from which truck movements will commence and from which containers will be forwarded to Port Botany.

Another key difference is the fate of containers entering the site. Whereas containers will not be processed at the St Marys intermodal site, the link between truck numbers from container throughput for the Moorebank Precinct West Concept application is based on a split between:

- empty containers brought to and from site
- containers being processed on site and being deconsolidated (or palletised) before distribution offsite
- containers moving on and off site without unpacking.

At a higher level, the traffic impact assessment for Moorebank Intermodal has assumed movement of goods by smaller trucks. Updated trip generation assumptions prepared for the approved MPW Stage 2 development application assume a greater proportion of container movements to and from warehouses would be by semi-trailers (65%) and smaller rigid trucks (30%), compared to the larger capacity B-doubles (5%). By comparison, the Applicant for the St Marys Intermodal application asserts that its trip generation is based on distribution by the larger semis and B-doubles, generating fewer movements carrying greater loads.

The Department does, however, consider that the link between container throughput and traffic movements requires ongoing verification throughout operation. To this effect, the Department has recommended a condition requiring traffic audits to be conducted when the yearly throughput at the site exceeds 50,000 TEU, 150,000 TEU and 300,000 TEU. A similar condition was imposed upon the approval for the Enfield Intermodal Logistics Centre, and has been used to monitor the traffic impacts of that proposal as use of that rail intermodal has intensified. A feedback loop inbuilt into the condition would require the auditor to be approved by the Department and recommend reasonable traffic improvements to be implemented by the Applicant in the event that predicted traffic numbers are exceeded or impacts to the road network are identified.

Overall, the Department is satisfied that operational traffic can be managed effectively and has recommended the Applicant implement an Operational Traffic and Access Management Plan to detail access arrangements for the site to ensure road and site safety, and demonstrate there will be no queuing on the road network. Given the importance of ensuring the vehicular access route is appropriate, the Department has also recommended the Applicant prepare a Biannual Trip Origin and Destination Report that records heavy vehicle movements numbers, number of containers received and transported off site, hours of operation for heavy vehicle access, and representative vehicle origins and destinations. The report would be provided to TfNSW and the Department regularly and allow the Applicant to adaptively manage the site.

Finally, the Department acknowledges Council's request to consider the need for the Applicant to make contributions to road network upgrades. Based on the conclusions of the Applicant's assessment and predictions that key intersections would remain at satisfactory levels of service, the Department's considerations above, and the recommended conditions, the Department considers that the Applicant need not be required to make contributions at the time of determination. However, in this regard, the Department reiterates that the recommended conditions would set a comprehensive set of adaptive management and auditing requirements that would endure during operation of the proposal and require the Applicant to effectively manage traffic effects of the proposal, including investigating the need for additional management measures where independent auditing identifies impacts above what has been predicted.

6.1.5 Onsite operations

The Department has reviewed the proposed operations on site, with a view to ensuring off-site impacts are managed effectively. The Department has proposed a series of conditions that would effectively manage on-site traffic and access across the site through a series of design requirements. The recommended conditions would require:

- a minimum 62 light vehicle and 7 truck parking spaces on site
- maintenance of sight lines for vehicles entering and exiting the site
- submission of plans that demonstrate internal roads and driveways and swept paths within the site and at the site access points meet Australian standards, and allow for vehicles to manoeuvre through the site in forward gear
- restrictions on queuing on public roads.

Detailed plans demonstrating these design criteria and objectives would be met would be required to be prepared in consultation with TfNSW and submitted to the Certifier.

To further support the effectiveness of traffic control during operation, the Department has recommended the Applicant prepare an Operational Traffic and Access Management Plan for the approval of the Secretary prior to operations. The plan must set out key details of access arrangements for the site to ensure road and site safety, demonstrate there will be no queuing on the road network, and onsite measures to ensure turning areas and internal access roads are kept clear of any obstacles, including parked cars, at all times.

6.2 Noise

The proposal involves noise generating activities during construction and operation:

- construction works, including:
    - pavement and hardstand construction
    - site establishment and delivery of materials
    - bulk earthworks
    - trench and utility works
- operation of the intermodal facility 24 hours per day, 7 days per week
- use of the surrounding road network and rail sidings for access to and from the facility.

6.2.1 Existing noise environment

As part of its environmental assessment of the proposal, the Applicant conducted background monitoring at four noise catchment areas (NCA), as shown in **Figure 9**.

Figure 9 | NCA and unattended noise monitoring locations (Source: Figure 1 of Applicant's NVIA, Revision D)

Noise impacts were a key issue raised in feedback provided by Council and public authorities including EPA and TfNSW. Key noise issues raised by public authorities included:

- construction noise
- operational noise, including road traffic noise
- rail noise, including brake squeal, wagon bunching and curve squeal
- adequacy of mitigation measures proposed.

6.2.2 Construction noise and vibration

The Applicant's Noise and Vibration Impact Assessment (NVIA) characterised construction works into five work packages, as shown in **Table 13** below. The staging of construction activities more broadly is described in **Section 2.2**.

Table 13 | Construction Assessment Work Packages (Source: Table 19 of Applicant's NVIA)

Work Package	Activities	Description
1	Site establishment and delivery of materials	Site set-up including environmental controls
2	Bulk earthworks	Including spoil removal
3	Trenches/utilities	-
4	Pavement/hardstand construction	-
5	Building delivery and installation	Building delivery and installation, pavement and landscaping works

The Applicant's NVIA identified construction activities for each work package, including predicted noise levels calculated based on indicative sound power levels. **Table 14** below shows the number of residential receivers where construction noise levels are predicted to exceed the noise management levels (NMLs) for the proposal. The Department notes that predicted construction noise levels exceed the NMLs for all scenarios at the closest sensitive receiver during standard hours. The largest number of noise level exceedances would occur during site establishment and pavement/hardstand construction activities.

Table 14 | Number of residential receivers where construction noise levels exceed the NMLs (Source: Table 21 of Applicant's NVIA)

Activities	Exceedance above Noise Management Level (NML), dB			
	1-10 dB(A) Clearly audible	11-20 dB(A) Moderately intrusive	>20 dB(A) Highly intrusive	Highly affected >75 dB(A)
Site establishment and delivery of materials	78	30	13	0
Bulk earthworks	61	21	1	0

Trenches/utilities	40	23	0	0
Pavement/hardstand construction	81	31	13	0
Building delivery and installation	6	0	0	0

The largest noise impacts would be experienced by residential properties to the south of facility, along the southern boundary of the Main Western Line rail corridor (Kalang Avenue and Camira Street), located in NCA 2. No residential receivers are predicted to be 'highly affected' during construction.

The NVIA also included a construction vibration assessment, to assess vibration intensive works during construction. The assessment found that use of vibratory equipment (for example, vibrating rollers) would comply with minimum vibration working distances based on recommendations of the TfNSW *Construction Noise and Vibration Strategy*. The Applicant advised it is not considered likely that works would occur within these minimum working distances.

The Applicant must comply with the recommended standard construction work hours outlined in the *Interim Construction Noise Guideline* (ICNG), which are as follows:

- Monday to Friday 7 am to 6 pm
- Saturday 8 am to 1 pm
- no work on Sundays or public holidays.

To manage construction noise impacts, the Department has recommended a condition requiring the Applicant to prepare and implement a Construction Noise and Vibration Management Sub-Plan, and submit to the Secretary for approval prior to the commencement of construction. This requirement is consistent with the approach to state significant projects and other intermodal projects, and must be prepared in accordance with the ICNG. The Sub-Plan should include verification of expected noise impacts and detailed examination of work practices, monitoring and review of works on site.

6.2.3 Operational noise from the facility

The NVIA determined operational noise limits for the proposal against environmental noise criteria derived from the *Noise Policy for Industry* (EPA 2017). The modelling assumed the presence of a 2.4 m high noise barrier along the southern edge of the heavy vehicle entrance (Forrester Road), on the northern side of the Main Western Line rail corridor.

Operational noise levels for the proposal were predicted under neutral and adverse meteorological conditions and are representative of the likely worst-case noise impact scenario. Residential receivers within NCA 2 (located to the south of the Main Western Line rail corridor) are expected to experience exceedances of up to 4dB(A) during daytime neutral conditions and night-time temperature inversion (SW wind) conditions, and up to 3dB(A) during night time neutral weather conditions. The Applicant advised operational noise levels from the proposal are not expected to exceed the project noise trigger levels at sensitive receivers in NCA 1, NCA 3 or NCA 4. **Table 15** below provides a summary of

predicted operational noise levels at 49 Kalang Avenue, St Marys (representative receiver for NCA 2), including exceedances.

Table 15 | Predicted operational noise levels – 49 Kalang Avenue, St Marys (NCA 2) (Source: Table 27 of Applicant's NVIA)

49 Kalang Avenue, St Marys (Representative of NCA 2)			
Weather Conditions	Sound pressure level at 50 m from the proposal L_{Aeq} dB(A)		
	Result	Criterion	Exceedance
Day neutral conditions	48	44	4
Evening neutral conditions	45	44	1
Evening south-westerly wind	43	44	-
Night neutral conditions	45	42	3
Night south-westerly wind	44	42	2
Night westerly wind	45	42	3
Night temperature inversion – SW wind	45	42	3
Night temperature inversion – W wind	46	42	4

The Applicant also assessed sleep disturbance noise levels under neutral and worst-case meteorological conditions. The Applicant advised that no exceedances of the sleep disturbance criteria are predicted at receivers within NCA 1, NCA 3 and NCA 4. A minor exceedance of 2dB(A) above the sleep disturbance criteria of 52 dB(A) is predicted for the worst affected residential receivers within NCA 2.

To manage operational noise impacts from the facility, the Applicant committed to implement a number of at-source noise mitigation measures. These measures include the use of 'soft landing' technology for reach stackers, quietened refrigeration units on refrigerated containers and optimisation of site layout to reduce noise emissions (i.e. locating refrigerated containers away from residential receivers in NCA 2). Additional mitigation measures including the construction of a noise barrier (see **Section 6.2.4**) have also been proposed.

The Department has closely reviewed the predicted noise impacts and recommended noise limits, and in forming the noise limits for the proposal notes:

- the proposal is closest to NCAs 2 and 3 and as such noise limits should be enforced for those NCAs

- the recommended operational noise limits represent the maximum predicted noise levels under adverse meteorological conditions
- L_{Amax} operational noise limits for night time have been adopted at NCAs 2 and 3, in order to address the sleep disturbance impacts of louder noise peaks (such as 'clangs and bangs' of containers, which will otherwise be controlled by the use of 'soft landing' technology)

The Department's recommended noise limits are provided below in **Table 16**.

Table 16 | Operational Noise Limits dB(A)

Location (residential receivers)	Day $L_{Aeq\ 15\ minute}$	Evening $L_{Aeq\ 15\ minute}$	Night $L_{Aeq\ 15\ minute}$	Night L_{AMax}
NCA 2	46 dB	46 dB	44 dB	55 dB
NCA 3	40 dB	36 dB	35 dB	52 dB

It is recommended that these noise limits are verified at key stages of the development, and the Department has recommended conditions requiring the Applicant to:

- undertake short term noise monitoring following commencement of each stage of the development to confirm that the development does not exceed the recommended limits
- implement appropriate noise attenuation measures if exceedances occur.

Based on the Department's review of the development, it is considered that implementation of the recommended noise barrier (see **Section 6.2.4** below) would be sufficient to avoid the need for other off-site attenuation measures.

Ultimately, the Department intends for these noise limits to operate as compliance based limits, as is the case for other major industrial developments, and be able to be monitored and enforced by the Department as necessary.

Road Noise Impacts

The Applicant assessed the effects of an increase in road traffic as a consequence of the proposal. The road noise assessment, included as part of the NVIA, concluded that predicted road noise impacts on routes to and from the site (with residential receivers) would be limited to 0.1 dB(A) during both day and night time periods.

Routes to and from the site with residential receivers include:

- Forrester Road (north of Glossop Street)
- Glossop Street
- Great Western Highway (east and west of Mamre Road)
- Mamre Road
- Werrington Road.

In accordance with the *NSW Road Noise Policy*, increases in impacts of less than 2dB(A) are considered to represent a 'minor impact that is considered barely perceptible to the average person'. The Applicant advised that negligible increases in noise emissions from heavy vehicles would occur and there are no significant noise impacts along any of the proposed routes. The Department accepts that the impacts should be considered negligible.

The Department has recommended conditions to manage noise impacts during operation. The recommended conditions are achievable, based on the proposed activities, and include:

- setting compliance-based operational noise limits, based on predicted noise levels as measured at sensitive receivers
- requiring construction of a noise barrier (see **Section 6.2.4** below).

6.2.4 Noise barrier

As part of the RtS, the Applicant proposed construction of a 2.4m noise barrier along the southern edge of the heavy vehicle entrance (Forrester Road) on the northern side of the Main Western Line rail corridor, shown by the blue line in **Figure 10** below.

Figure 10 | Applicant's proposed noise barrier location (blue line) (Source: Figure 3 of Applicant's NVIA)

While construction of a noise barrier on the northern side of the rail corridor would reduce operational noise impacts from the facility to receivers within NCA 2, it would not provide any noise reduction from rail operations on the Main Western Line (including use of the rail sidings) at those receivers.

In its submission on the RtS, the EPA considered the noise assessment provided did not analyse the process used to determine what mitigation measures are feasible and reasonable, including justification for the height of the proposed noise barrier. Further, the EPA recommended investigation of a noise barrier located to the south of the Main Western Line rail corridor along Camira Street. This would provide noise mitigation to a broader cross section of affected receivers and have the consequential benefit of reducing existing and project modified rail noise at receivers within NCA 2. The RtS considered this option to not be reasonable or feasible due to land ownership issues, ongoing maintenance, visual impacts, heritage impacts on St Marys Station and overshadowing. The Applicant also considered a 5 m height increase to the proposed noise barrier on the northern side of the rail corridor to not be reasonable due to visual, heritage and overshadowing impacts.

On 27 March 2020, the Department requested additional noise modelling be undertaken by the Applicant to investigate and model noise attenuation provided by a noise barrier located along the southern edge of the Main Western Line reserve (just north of Camira Street), as shown by the red line in **Figure 11**. This barrier was modelled to replace the previously proposed noise barrier on the northern side of the rail corridor.

Figure 11 | Location of proposed southern noise barrier (red line) (Source: Nearmap)

In response to the Department's request, the Applicant submitted an updated Noise and Vibration Impact Assessment – Noise Barrier Locations, dated 9 April 2020. The updated assessment modelled noise attenuation from a new southern location (Camira Street barrier) at three heights of 2.4 m, 3.0 m and 3.6 m.

The updated assessment found that the location of the Camira Street barrier in place of the previous northern barrier would see significant L_{Aeq} noise level reductions at sensitive receivers within NCA 2 (under worst case weather conditions) from operation of the facility, as shown in **Table 17** below.

Table 17 | Reduction in noise levels for Camira Street barrier during the night-time under worst case weather conditions (NCA 2) (Source: Table 11 of Updated Noise Assessment)

Height of Camira Street Barrier	Reduction in noise levels compared with previous site barrier, dB		
	Lowest	Highest	Average
2.4 m	-0.5	2.1	0.7
3.0 m	-0.1	4.8	2.8
3.6 m	0.4	6.9	4.7

In addition, predicted operational noise levels from implementing the Camira Street barrier at a height of 3.0 m would be within 2 dB(A) of the project noise trigger level of 42 dB(A), at the closest sensitive receivers in NCA 2 at night. Under this worst-case scenario, residual noise levels from the proposal of 2 dB(A) or less would be considered 'negligible', in accordance with the *Noise Policy for Industry*. Consequently, the Applicant would not be required to implement at-receiver based treatment at sensitive receivers along Camira Street (as previously proposed in the RtS), if the Camira Street barrier is to be constructed and implemented.

Significantly, construction of a 3.0 m high Camira Street barrier would have the ancillary benefit of reducing noise from rail operations on the Main Western Line, at the closest sensitive receivers along Camira Street/Kalang Avenue (NCA 2) by up to 11 dB(A) during daytime, neutral weather conditions (see **Table 18** below).

Table 18 | Existing L_{Aeq} rail noise levels – Daytime, Neutral weather, including reductions (NCA 2) (Source: Table 9 of Updated Noise Assessment)

Address	$L_{Aeq\ (15\ min)}$ noise levels, dB(A)				Reduction in noise levels compared with previous site barrier, dB		
	Camira Street barrier			Previous Site barrier[1]	2.4 m	**3.0 m**	3.6 m
	2.4 m	3.0 m	3.6 m				
43 Kalang Ave	48	46	45	52	4.6	**6.0**	6.9
47 Kalang Ave	49	47	46	55	5.9	**7.7**	8.8
49 Kalang Ave	52	50	48	61	8.6	**11.0**	12.8

1 Camira St	53	50	48	61	8.6	**11.0**	12.8
3 Camira St	52	50	48	61	9.0	**11.3**	13.0
5 Camira St	51	49	48	61	9.3	**11.4**	13.1
7 Camira St	52	50	48	61	8.8	**11.1**	12.9
9 Camira St	53	50	48	61	8.1	**10.6**	12.5
11 Camira St	53	50	49	61	8.1	**10.6**	12.5
13 Camira St	52	50	48	61	9.0	**11.4**	13.2
15 Camira St	52	50	48	61	9.2	**11.5**	13.3
75 Carinya St	54	51	49	61	7.6	**10.3**	12.2

[1] The previous site barrier does not provide any noise reduction from existing rail movements to residents within NCA 2.

As previously stated, the 2.4 m noise barrier on the northern side of the rail corridor (proposed as part of the RtS) did not provide any noise benefit from existing rail noise at receivers within NCA 2. The Department and the EPA consider that construction and implementation of a 3.0m high Camira Street barrier would be a significant environmental benefit for the project, and substantially mitigate noise impacts at receivers within NCA 2 from both operational noise from the facility and noise from rail operations on the Main Western Line.

The updated noise assessment concluded the Camira Street barrier would be more effective at mitigating noise impacts than the initially proposed 2.4 m barrier on the northern side of rail corridor. The Applicant considered 3.0 m an optimal height for the noise barrier, which would remove the requirement for at-property treatment as previously proposed in the RtS.

The Department supports the construction and implementation of a 3.0 m high Camira Street barrier, to be constructed inside the southern boundary of the Sydney Trains corridor, on RailCorp land. As a result, the Department has recommended that the:

- Applicant obtain RailCorp's agreement (via Sydney Trains) to the design and construction of a noise barrier at this location; and
- the Planning Secretary be given powers to require alternative noise mitigation measures if agreement cannot be reached between the parties.

If agreement to the Camira Street barrier is not obtained, the Department recommends that the Planning Secretary be given the power to require alternative forms of mitigation, including:

- installation of at-receiver treatment (such as double glazing, secondary glazing of 'weak' areas or insulation) at affected residences
- construction of a barrier in the original location shown in **Figure 10**.

6.2.5 Rail noise from operation of rail sidings

As part of its assessment of operational noise impacts, the Department has considered the impacts of rail noise associated with the use of the rail sidings. The Department understands Pacific National hold five train paths per day to access the existing rail sidings between the Main Western line and the facility. It is understood that these paths differ across the week and would range across the day and night to avoid peak times dedicated to passenger services. The Applicant advised all freight trains would be hauled with a Class 82 diesel locomotive that may be up to 600 metres in length. Rail noise impacts from operation of the existing Main Western Line have been discussed in **Section 6.2.4** above.

Operation of the rail sidings would result in rail noise, with the potential for brake squeal, wagon bunching and wheel squeal. Wheel squeal, for instance, is defined in the *Rail Infrastructure Noise Guideline* (RING) (EPA, 2013) as 'mid- to high-frequency tonal squeal noise produced by the stick-slip action between the wheels and rails'. Wheel and brake squeal are considered a high priority for mitigation under that guideline.

During exhibition of the EIS, TfNSW and the EPA raised concern over the adequacy of the Applicant's assessment of rail noise (i.e. brake squeal, wagon bunching and curve squeal) from trains using the rail sidings, including proposed mitigation measures to manage rail noise impacts at receivers within NCA 2. Consequently, the Applicant's NVIA — submitted as part of the RtS — included noise modelling from train movements into and out of the facility in accordance with the RING. The Applicant advised train movements into and out of the facility are expected to generally comply with the RING criteria; however, sleep disturbance impacts from rail movements are predicted for NCA 2. In particular, curve squeal (up to 8 dB(A)) and bunching (up to 4 dB(A)) are expected to exceed operational sleep disturbance criteria in NCA 2.

Notwithstanding the exceedances outlined above, the Applicant advised noise levels are not predicted to exceed awakening reaction levels of 65 dB(A) at any noise sensitive receiver. The Applicant also noted the existing noise environment within NCA 2 already experiences L_{Amax} noise levels in excess of 70dB(A) during the night time period, due to surrounding industrial uses and train pass-bys.

In addition, the Applicant's updated noise assessment stated that construction and implementation of a 3.0 m high Camira Street noise barrier would lead to significant reductions in L_{AMax} wheel squeal (Night time, Inversion Westerly Wind) at two sensitive receivers, as noted below:

- 49 Kalang Avenue – 3.8 dB(A) reduction
- 15 Camira Street – 4.1 dB(A) reduction.

The Applicant noted that noise modelling did not include the use of rail lubricators to reduce curve squeal. Further, the Applicant committed to implement engineering design changes as part of

refurbishment works to widen the gauge along the rail curve leading to/from the facility. This would have the benefit of alleviating the wheel flange pushing outwards on the rail when wagons try to straighten on the curve.

To further mitigate brake squeal, wagon bunching and wheel squeal impacts, the Department has recommended conditions relating to rail operations and noise, including:

- preparation of a pre-operation Brake Squeal Report to identify, mitigate and monitor brake squeal impacts
- requirements for port shuttle locomotives and wagons to use available best practice noise and emission technologies
- maintenance of a rail noise monitoring system at the commencement of operation, to continuously monitor noise from rail operations on the rail link. The noise results from each train must be made available online within 24 hours, together with annual reporting of results.

The Department has also recommended at-source measures to be implemented on the rail siding during operation:

- automatic rail lubrication equipment to be used in accordance with *ASA Standard T HR TR 00111 ST Rail Lubricant* and top of rail friction modifiers, where required
- maintenance of the rail cross section profile in accordance with *ETN-01-02 Rail Grinding Manual for Plain Track*, to ensure the correct wheel/rail contact position.

These conditions are consistent with the approach to managing rail noise for infrastructure projects and other intermodal projects.

6.3 Contamination

Contamination is a key issue for the proposal, based on numerous activities previously undertaken onsite (as noted in **Section 1.2**). These activities are generally considered to be mostly industrial activities, with the site most recently being filled with material excavated from the Northside Sewerage Tunnel Project in 1999.

The Applicant submitted a Preliminary Site Contamination Report, Supplementary Site Contamination Assessment Report, and Remediation Action Plan (RAP), all prepared by Douglas Partners, as part of the EIS. These assessments concluded that the site is clear of groundwater contamination and indicated the site can be made suitable for the proposed development, subject to successful remediation and validation of asbestos-impacted soils in the far northern portion of the site and implementation of an Unexpected Finds Protocol.

During exhibition of the EIS, the EPA and Council recommended the Applicant undertake:

- additional quantitative asbestos sampling across the site
- further sampling of stockpile SP3
- preparation of a revised RAP, to calculate the extent of contaminated material and identify the preferred remedial strategy for the site

- a site walkover and further sampling of the railway corridor.

6.3.1 Remediation

As part of the RtS, the Applicant prepared an updated RAP, that recommended the following contaminated site material to be placed within a containment cell on site:

- known asbestos fill soils excavated from the northern portion of the site (see **Figure 12**)
- soil excavated from stockpile SP4, impacted with pesticides at levels exceeded scheduled chemical waste criteria (see **Figure 12**).

The location of the proposed containment cell (to be located underneath the pavement hardstand) is shown at **Figure 12**.

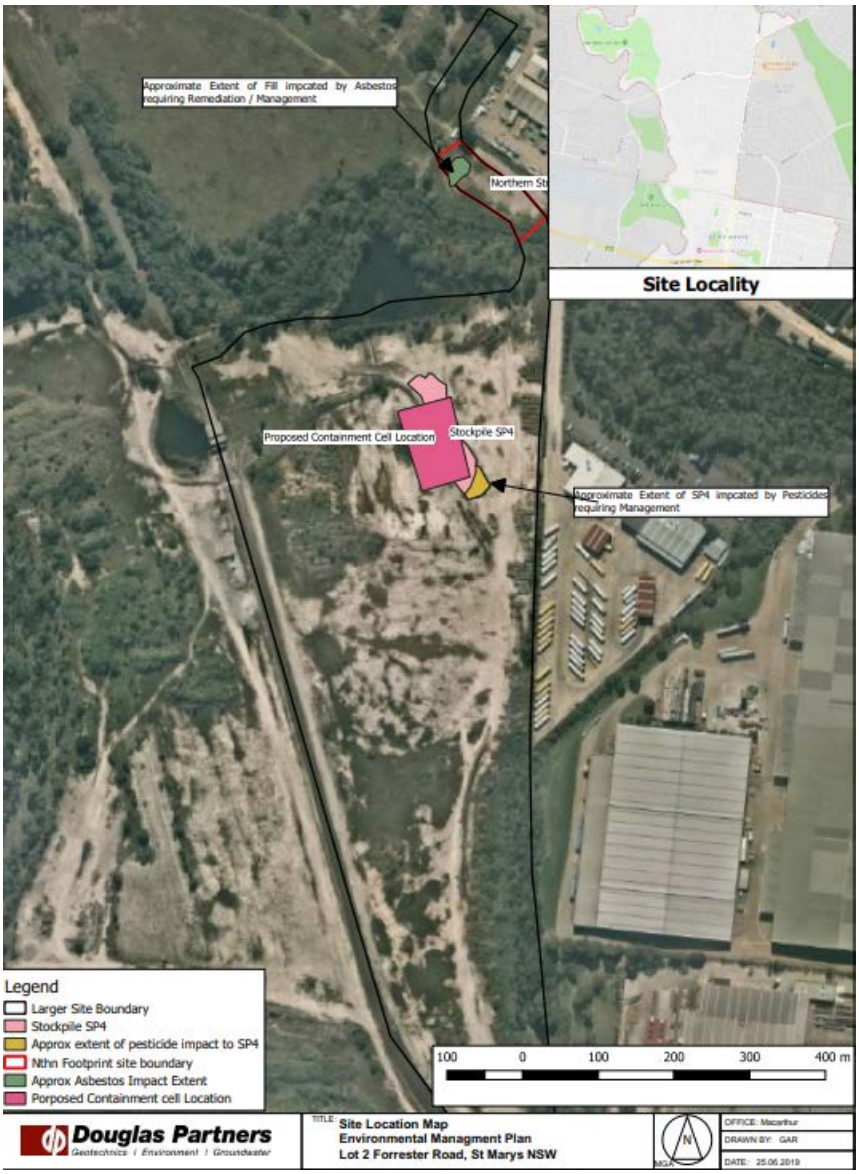


Figure 12 | Site Location Map, showing extent of contamination to be remediated (Source: Interim Environmental Management Plan, Douglas Partners, August 2019)

The Applicant's updated RAP included consideration of several remediation options, in accordance with the NEPC (2013) and the NSW EPA *Contaminated Land Management Guidelines for the NSW Site Auditor Scheme* 3rd Editions (NSW EPA, 2018). Ultimately the Applicant, in consultation with Douglas Partners, considered the use of an onsite containment cell to be the preferred remediation option to minimise truck/transport disturbance at nearby off site areas and generally lower remediation costs than offiste disposal to landfill.

The Department understands the proposed containment cell management area would include a suitably sized containment cell (20 m in length, 10 m in width and 2 m in depth) and a capping layer comprising a geo-textile fabric liner covered by 0.5 m of clean fill. The area would subsequently be covered by a concrete slab. The Applicant advised the final containment cell design would be reviewed by Douglas Partners prior to the commencement of construction.

To manage on site impacts associated with the proposed containment cell, the Applicant submitted an Interim Environmental Management Plan (IEMP). The intent of the IEMP is to outline control measures to manage risks associated with filling the proposed containment cell, and to protect human health and the environment. The Department notes the IEMP would be updated to include final volumes of impacted soil, final survey/dimensions of the cell and any additional information, at the completion of remediation and construction works.

The Department further notes results of an additional assessment of contamination in stockpile SP3 and the railway corridor, prepared by Douglas Partners. The assessment did not identify asbestos at concentrations exceeding SAC levels (commercial/industrial land use) in either location. Douglas Partners recommended no further investigation or remediation works are required at stockpile SP3 and within the rail corridor (as shown in Appendix B of the updated RAP).

Overall, the Department considers that the safe completion of earthworks and remediation is a key outcome of the proposal and has recommended a condition requiring all remediation approved as part of the proposal to be carried out in accordance with the updated Remediation Action Plan. Further, the Department has recommended waste classification (for materials to be removed) and validation (for materials to remain) be undertaken as part of the Construction Environmental Management Plan (CEMP) for the proposal, prior to the commencement of construction.

To verify the adequacy of remediation works on site, the Department has recommended a condition requiring the Applicant commission an accredited Site Auditor to prepare a Site Audit Report and Section A Site Audit Statement to determine that the relevant part of the site verify the relevant part of the site is suitable for commercial/industrial land use. Environmental management obligations attached to the Site Audit Statement would be set out in an associated long term management plan.

6.3.2 Unexpected Finds

The potential for unexpected contamination finds is a risk on all construction sites. The Applicant's Asbestos Investigation Report states, for example, that there remains the potential for other pockets of asbestos impacted fill across the site and surrounds.

To manage the potential for unexpected finds, the Department recommended the Applicant prepare an unexpected finds procedure prior to the commencement of earthworks, to ensure potentially contaminated material is appropriately managed. The procedure would be required as part of the CEMP for the proposal, which the Department recommends be submitted to the Planning Secretary for approval prior to the commencement of construction.

6.4 Biodiversity

The proposal would require the removal of 1.51ha of native vegetation within the intermodal site boundary, including 0.62 ha of the River-Flat Eucalypt Forest of Coastal Floodplains of the New South Wales North Coast, Sydney Basin and South East Corner Bioregions endangered ecological community listed under *the Biodiversity Conservation Act 2015* (BC Act). **Table 19** below provides a summary of the impacts to vegetation located within the proposal area and **Figure 13** maps plant community types on the site.

Table 19 | Vegetation clearing (Source: Applicant's Biodiversity Development Assessment Report 2019, V4)

Vegetation Zone	Plant Community Type (PCT)	Equivalent threatened ecological community (TEC) - BC Act	Conservation Status	Total area of impact (ha)
1	Forest Red Gum - Rough-barked Apple grassy woodland on alluvial flats of the Cumberland Plain, Sydney Basin Bioregion (PCT 835)	River-Flat Eucalypt Forest of Coastal Floodplains of the New South Wales North Coast, Sydney Basin and South East Corner Bioregions	EEC	0.29
2	Forest Red Gum - Rough-barked Apple grassy woodland on alluvial flats of the Cumberland Plain, Sydney Basin Bioregion (PCT 835)	River-Flat Eucalypt Forest of Coastal Floodplains of the New South Wales North Coast, Sydney Basin and South East Corner Bioregions	EEC	0.28
3	Swamp Oak open forest on riverflats of the Cumberland Plain and Hunter valley (PCT 1800)	River-Flat Eucalypt Forest of Coastal Floodplains of the New South Wales North Coast, Sydney Basin and South East Corner Bioregions	EEC	0.06
4	Swamp Oak open forest on riverflats of the Cumberland Plain and Hunter valley (PCT 1800)	Not consistent with TEC	no	0.69
5	Phragmites australis and Typha orientalis coastal freshwater wetlands of the Sydney Basin Bioregion (PCT 1071)	Not consistent with TEC	no	0.19

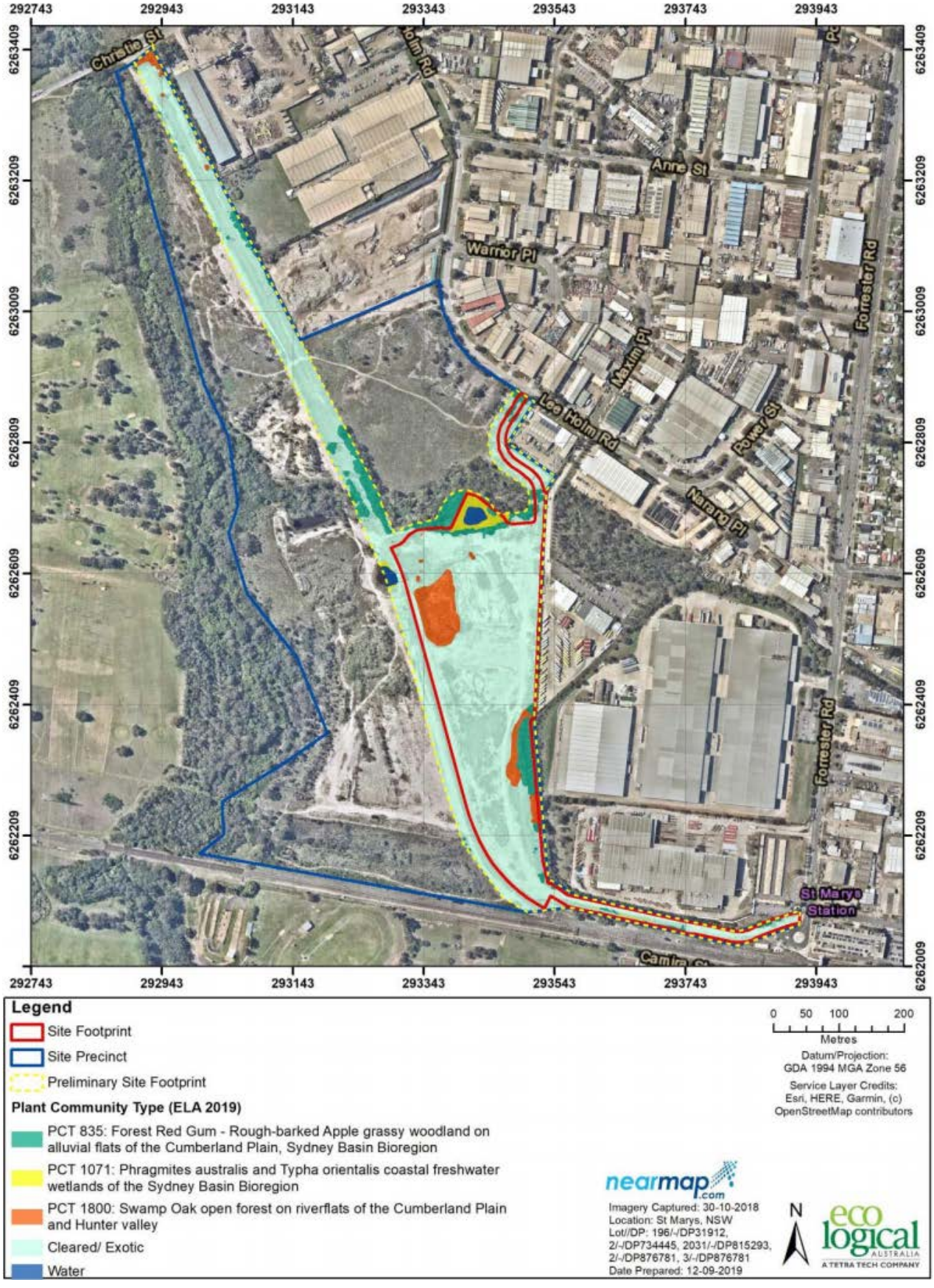


Figure 13 | Plant Community Types (Source: Applicant's RtS)

The proposal would have direct impacts to one threatened flora species and one fauna species listed under the BC Act. A summary of the impacts is shown in **Table 20**.

Table 20 | Direct impacts on threatened species and habitat (Source: Applicant's Biodiversity Development Assessment Report 2019, V4)

Plant Community Type (PCT)	Equivalent threatened ecological community (TEC) - BC Act	Total area of impact (ha)
Grevillea juniperina subsp. juniperina	Juniper-leaved Grevillea	0.63
Myotis macropus	Southern Myotis	0.94

Biodiversity Offsets

Under the Biodiversity Assessment Methodology (OEH, 2017) (BAM), a total of 15 ecosystem credits and 19 species credits are required to offset the impacts of the proposal. **Table 21** and **Figure 14** provide a summary of the proposed offset credits required for direct impacts.

Table 21 | Biobanking Offset Credit Requirements (Source: Applicant's Biodiversity Development Assessment Report 2019, V4)

Plant Community Type (PCT)	Credits Required
Ecosystem Credits	
Forest Red Gum - Rough-barked Apple grassy woodland on alluvial flats of the Cumberland Plain, Sydney Basin Bioregion (PCT 835)	5
Forest Red Gum - Rough-barked Apple grassy woodland on alluvial flats of the Cumberland Plain, Sydney Basin Bioregion (PCT 835)	6
Swamp Oak open forest on riverflats of the Cumberland Plain and Hunter valley (PCT 1800)	1
Phragmites australis and Typha orientalis coastal freshwater wetlands of the Sydney Basin Bioregion (PCT 1071)	3
Total ecosystem credits required for offsetting	**15**
Species Credits	
Grevillea juniperina subsp. *juniperina*	10
Myotis macropus	9
Total species credits required for offsetting	**19**

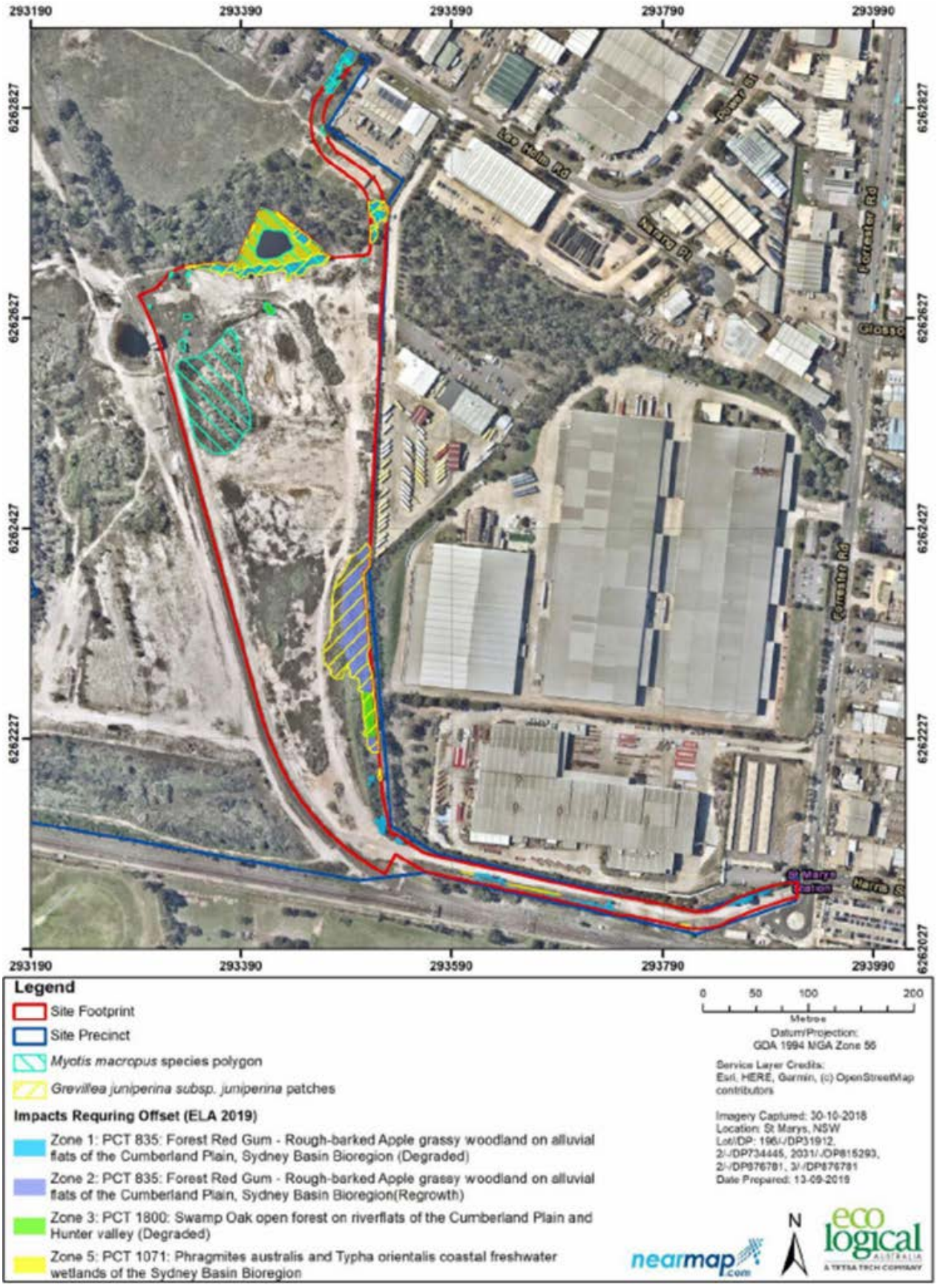


Figure 14 | Biodiversity impacts requiring offset (Source: Applicant's RtS)

During the EIS exhibition, Blacktown & District Environment Group Inc objected to the loss of remnant ecological communities on the site. The group considered that offsetting off site through biobanking or other means would result in a net loss and reduction of ecological communities and species overall.

The Department notes that the Applicant's assessment was conducted under the requirements of the BAM and the BC Act, which emphasise the avoidance and minimisation of biodiversity impacts, while providing for off site offsetting of residual impacts. The Department reviewed the Biodiversity Development Assessment Report (BDAR) (V1, dated 24 April 2019) and offsets proposed by the Applicant against the requirements of the BAM in consultation with EES Group.

The Department considers that the BDAR outlines an acceptable process of avoiding and minimising impact and managing and offsetting residual impacts. In this regard, the Department notes that:

- the Applicant's revised site footprint has reduced some impacts to native vegetation, including by reducing the footprint of internal access roads
- notwithstanding this, the vast majority of the site will comprise concrete hardstand, and most vegetation will be cleared
- the proposal would, however, retain vegetation within the riparian corridor immediately to the north of the site (i.e. along Little Creek) and remnant native vegetation within road verges
- the Applicant has recommended a Vegetation Management Plan be prepared and implemented to enhance native vegetation that has been degraded by weeds within the riparian corridor, and also that the boundary of site be clearly demarcated to protect retained native vegetation.

The Department was assisted in its review of the BDAR by comments from EES Group, which:

- requested additional information be provided on areas not mapped as native vegetation
- sought further justification for the mapping of the *Myotis Macropus* species polygon and biodiversity impacts that have not been avoided
- recommended a vegetation management plan be prepared to protect and enhance retained vegetation within the riparian corridor directly to the north of the development area.

In response to advice received from EES Group during exhibition, the Applicant submitted an updated BDAR (V4, dated 13 September 2019) as an Appendix to the RtS, that included revised ecosystem and species credit requirements to reflect the redesign of the proposal site from the initial concept layout. EES Group advised that all issues previously raised have been addressed in the updated BDAR, however recommended the Applicant prepare a vegetation management plan to protect and enhance retained vegetation. Consequently, the Department has recommended a condition requiring the Applicant to prepare a vegetation management plan as part of the Landscape Plan, to be prepared prior to the commencement of construction.

The Department is satisfied that the proposal's biodiversity impacts have been assessed in accordance with the BAM and the appropriate offset credits have been generated as identified in

Table 21 (see above). To ensure these impacts are offset, the Department has recommended conditions requiring that ecosystem and species credits identified in **Table 21** must be offset as well as a condition requiring the Applicant to prepare a Biodiversity Management Sub-Plan (BMSP) that would detail measures to minimise impacts on species on site, protect biodiversity values not directly impacted by the proposal, and provide procedures for weed control. The BMSP must be submitted to the Planning Secretary for approval prior to the commencement of construction.

6.5 Stormwater, drainage and flooding

The Applicant's proposed stormwater and drainage system, and management of flood impacts during construction and operation, are key issues in the assessment of the proposal.

6.5.1 Stormwater and Drainage

During the EIS exhibition, Council raised several concerns in regard to the management and treatment of stormwater runoff from site, in particular:

- the proposed treatment system did not meet Council's Water Sensitive Urban Design (WSUD) policy requirements for pollutant removal
- no electronic MUSIC modelling was provided for Council's assessment
- civil plans did not provide the proposed location of vegetated swales, rainwater tanks, Enviropods, or cross section details for proposed gross pollutant traps (GPTs).

The EPA also requested the Applicant consider the NSW Water Quality and River Flow Objectives (WQO), to ensure water management design is appropriately managed to contribute towards water quality outcomes.

The Applicant submitted an updated Stormwater Management Plan (SMP) as part of the RtS for the proposal. The SMP included DRAINS and MUSIC modelling to evaluate whether water flows and quality comply with Council's WSUD Policy and the EPA's WQO's, where relevant for the site.

The updated SMP was designed to manage stormwater runoff by:

- creating a pit and pipe system to collect and convey runoff up to the 5% AEP rainfall event, proposed to discharge to Little Creek via a sediment and bio-retention basin in the north of the site
- creating overland flow paths across hardstand areas to convey flows up to the 1% AEP, in a northerly direction toward Little Creek
- providing on-site storage capacity of 1,000m^3, to moderate site discharge during a 97% AEP (i.e. 1 in 3 month event)
- providing rainwater tanks to enable the reuse of non-potable water on site.

The updated SMP proposed a revised stormwater treatment system to manage gross pollutants, sediments, nutrients and hydrocarbons prior to discharge into Little Creek. The stormwater treatment system (**Figure 15** and **Figure 16**) included the following components:

- a 25kL rainwater tank to capture runoff from office buildings, to be reused for toilet flushing
- a 100kL rainwater tank to capture runoff from the transport and container workshops, to be reused in the proposed wash bay
- combined sediment, bio-retention and attenuation basin in the north of the site
- ocean protect gross pollutant inlets (Enviropods) to capture pollutants in pits on the Lee Holm Road access road
- vegetated swales to capture runoff from batters across the site, prior to discharging to the piped drainage system.

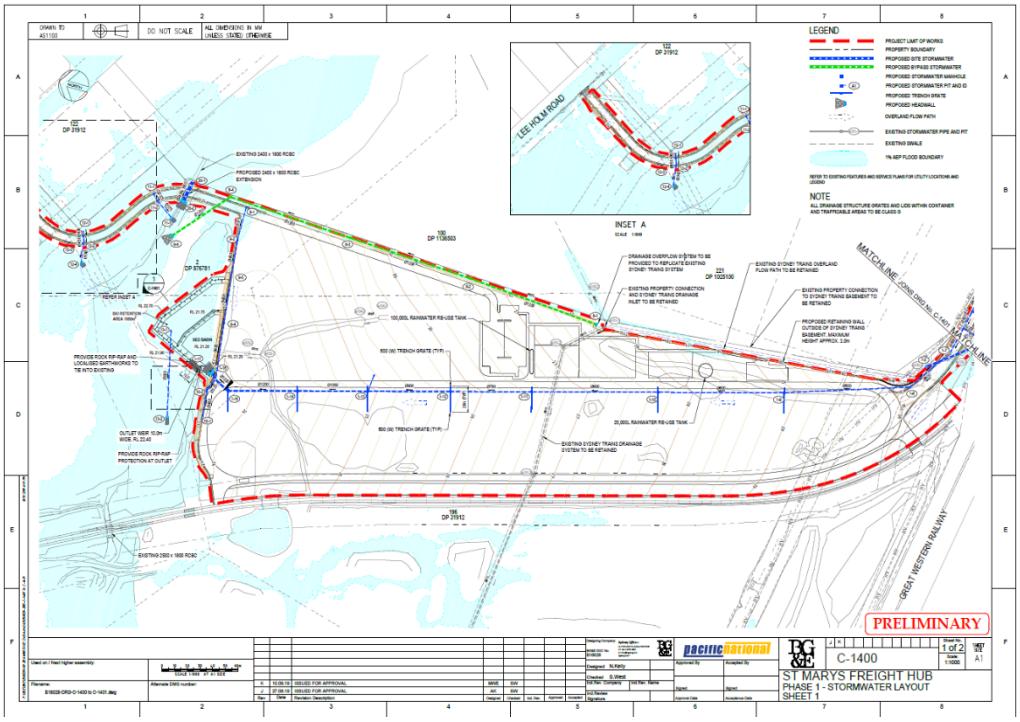


Figure 15 | Applicant's revised stormwater layout – Sheet 1 (Source: Applicant's RtS)

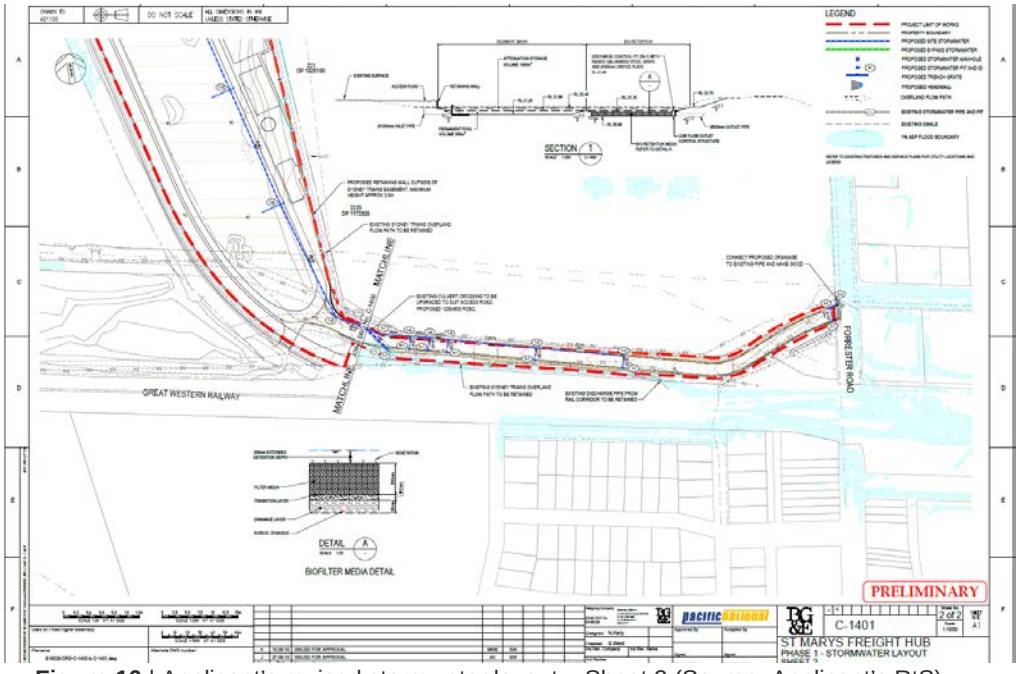


Figure 16 | Applicant's revised stormwater layout – Sheet 2 (Source: Applicant's RtS)

The Applicant's updated SMP stated the revised proposed stormwater treatment system would comply with Council's nutrient reduction targets, as shown in **Table 22** below.

Table 22 | WSUD Pollution Reduction Results (Source: Applicant's RtS)

Pollutant	Reduction Target Required (%)	Pollutant Reduction Achieved (%)	Compliance
Gross Pollutants	90	99.9	Achieve Target
Total Suspended Solids	85	95.6	Achieve Target
Total Phosphorus	60	81.1	Achieve Target
Total Nitrogen	45	54	Achieve Target

The Department understands no On Site Stormwater Detention (OSD) is proposed for the site. The Applicant considered that there may be less impact to Little Creek by omitting the OSD, noting that the site's peak flow would pass prior to the overall peak flows of Little Creek. This is considered to be acceptable.

Dam Dewatering

As part of the RtS, the Applicant prepared a Dam Dewatering Plan to address water quality and re-use concerns raised by Council about conversion of the existing former sediment basin for use as the combined sediment, bio-retention and attenuation basin. The Dam Dewatering Plan stated that water quality within the existing dam is generally better than water quality tested downstream in South Creek, with only Ammonia and total Nitrogen concentrations marginally exceeding the ANZECC trigger values in the dam. A low Faecal Coliform concentration and low Biological Oxygen Demand was also recorded in the dam. **Figure 17** below provides an overview of the Applicant's Dam Dewatering Plan.

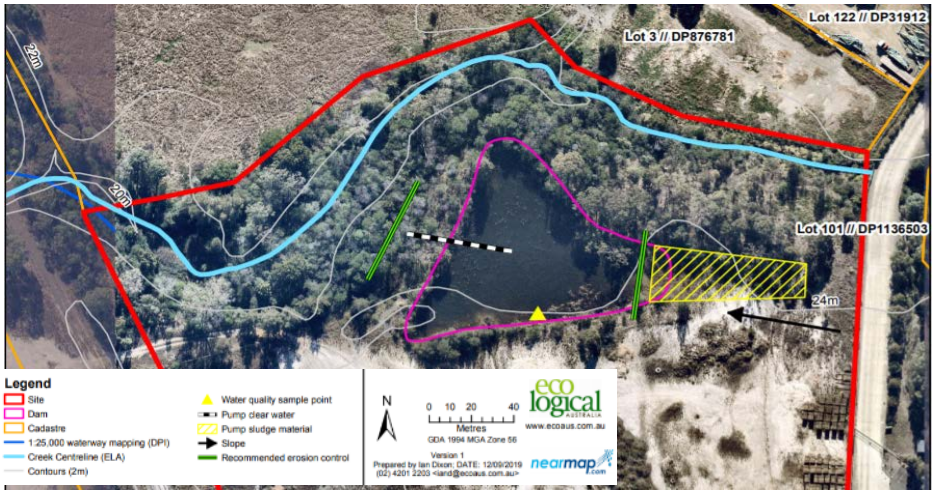


Figure 17 | Dam Dewatering Plan (Source: Appendix 7 of Applicant's RtS)

The Department has reviewed the proposed stormwater management measures, in consultation with public authorities, and concluded that stormwater treatment measures have been designed in accordance with Council's requirements and can adequately manage stormwater flows from the site.

The Department has recommended conditions to manage the discharge of stormwater to surrounding waterways during construction and operation. Prior to the commencement of construction, the Applicant must:

- implement measures to manage stormwater discharge and flood flows as part of the Construction and Soil Water Management Plan, within the CEMP
- install and maintain erosion and sediment controls in accordance with *Managing Urban Stormwater: Soils & Construction* (4th Edition, Landcom 2004) — aka the 'Blue Book'
- design and construct all stormwater drainage in accordance with relevant Council adopted policies and guidelines.

Further, within three months of the commencement of construction, the Applicant must finalise its design of the operational stormwater management system in accordance with applicable Australian Standards, *Australian Rainfall and Runoff* (Engineers Australia, 2016) and *Managing Urban Stormwater: Council Handbook* (EPA, 1997) guidelines.

The Department has also recommended a condition requiring the Applicant to prepare a Stormwater Quality Management Plan. The plan must ensure proposed stormwater quality measures remain effective and contain maintenance schedules, records and reporting details, relevant contact information and work health and safety requirements.

The Department considers that the proposed conditions would reiterate the Applicant's commitments to finalise the design of its stormwater to meet the relevant requirements.

6.5.2 Flooding

The site is affected by localised flooding along Little Creek and is identified as a Flood Planning Area under the PLEP 2010. As part of the EIS, the Applicant prepared a Flood Impact Assessment (FIA) to determine the impact of the facility on the 0.2%, 0.5%, 1% and 5% AEP and the PMF. The Applicant adopted the following flood studies from Council for flood planning:

- Little Creek was modelled using TUFLOW model software as part of the Little Creek Catchment Overland Flood Study (WMAwater, 2017)
- South Creek was modelled using RMA-2 software as part of the South Creek Flood Study (WorleyParsons, 2015).

The Applicant advised only flood modelling for the Little Creek model had been undertaken for the proposal, and that Council's flooding engineer (in correspondence dated 27 July 2018) considered it acceptable for the proposal to not assess the South Creek model as part of the FIA.

The FIA stated flooding from Little Creek dominates on-site flood impacts up to the 0.2% AEP, whereupon larger floods are dominated by flooding from South Creek.

The FIA concluded the proposed development would:

- not expose any resident to unacceptable levels of risk, or property to unreasonable damage
- not increase flood hazard or risk to other properties
- become only partially inundated during a PMF event on South Creek (approximately half of the development area).

During the EIS exhibition, Council raised concern regarding modelling of hydrological and flooding impacts associated with the proposed culvert to cross Little Creek (at the Lee Holm Road access). To address this concern, the Applicant provided an updated FIA as part of the RtS. The updated FIA re-ran the existing flood model to incorporate proposed development earthworks, existing drainage modifications, and drainage and culverts beneath the access road from Lee Holm Road, as part of the flood model. The Applicant advised the existing Little Creek culvert (at the Lee Holm Road access) is expected to be exceeded in small magnitude events (i.e. 0.5 EY event). To minimise the impact of the development on flood behaviour, the Applicant proposed to appropriately size the Little Creek culvert at the Lee Holm Road access to ensure no adverse impacts to upstream flood levels.

The Department understands the northern portion of the site would be impacted by the South Creek PMF. Most of the site would not be affected by flooding up until the PMF, however the 5% AEP event flows are expected to exceed existing channel capacity in Little Creek and spill on to site (see **Figure 18** and**Figure 19**). During large flood events, the Applicant proposed a shelter-in-place strategy to mitigate risks to occupants on site during a flood event. Proposed buildings on site would be located above the South Creek and Little Creek PMF, to provide occupants a safe location to shelter (see **Figure 20**).

The Department recommended the Applicant prepare a Flood Emergency Response Sub-Plan (FERSP), submitted as part of the CEMP, to manage flood emergency response for both construction and operation phases of the development. The FERSP must address the provisions of the *Floodplain Risk Management Guidelines* (as maintained by EES Group) and include details of predicted flood levels, flood warning time and notification, and assembly points and evacuation routes.

The Department accepts the Applicant's position that adjacent properties are not likely to be exposed to unacceptable levels of flood hazard from the proposal, subject to implementation of all management measures stipulated in the FIA, including:

- retaining the existing 675 mm pipe to convey flows from the rail corridor easement
- incorporating cross drainage into the Lee Holm Road access road
- ensuring the level of the road will be at or lower than the existing Westbus site, at the Lee Holm Road access road
- ensuring the proposed culvert at the Lee Holm Road site access is appropriately sized to ensure no adverse impact to upstream flood levels.

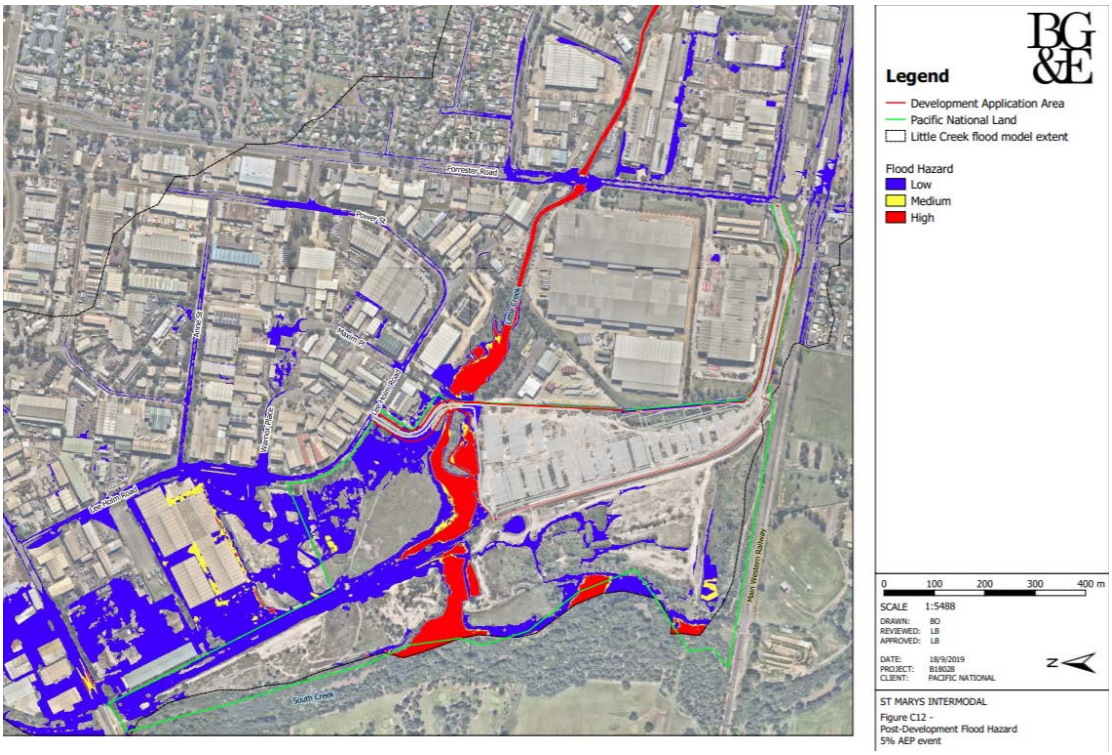


Figure 18 | 5% AEP event post development flood hazard – Little Creek (Source: Updated FIA)

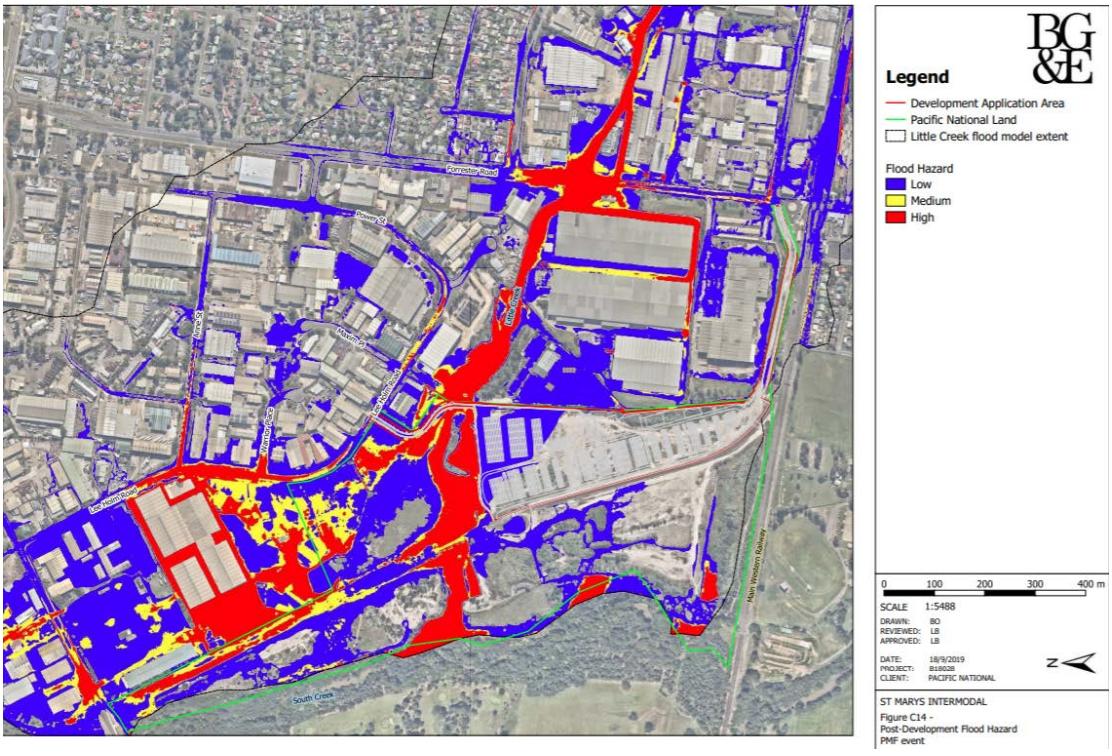


Figure 19 | PMF event post development flood hazard – Little Creek PMF (Source: Updated FIA)

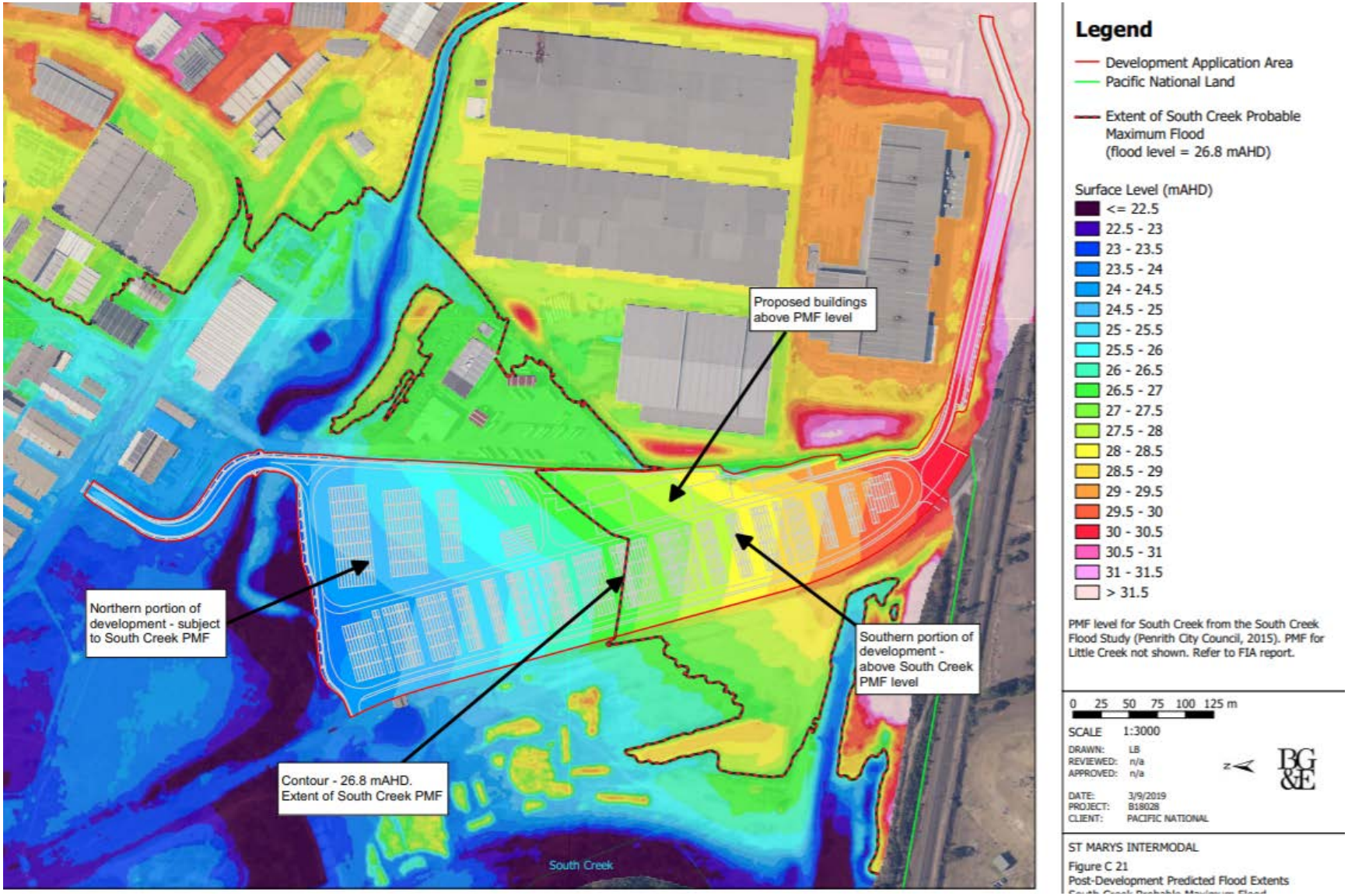


Figure 20 | Post development predicted flood extent - South Creek PMF (Source: Updated FIA)

6.6 Other Issues

The Department's consideration of other issues is provided at **Table 23**.

Table 23 | Department's assessment of other issues

Issue	Findings	Recommended conditions
Air quality	• The EIS included an Air Quality Impact Assessment (AQIA), which used a qualitative approach to assess air quality impacts during construction and a quantitative assessment of the ongoing operation of the facility and use of the rail sidings. • The AQIA concluded that dust from earthworks, stockpiling and construction activities could be appropriately managed by watering of exposed soil surfaces, avoidance of dust generating activities during adverse weather conditions and ensuring vehicles entering and leaving the site are covered. • Impacts of site operations were modelled, with the AQIA predicting exceedances of the $PM_{2.5}$ cumulative 24-hour criterion (0.7 ug/m^3 exceedance) and annual criterion (0.4 ug/m^3 exceedance). The project $PM_{2.5}$ contribution was asserted to be minor, with predicted incremental concentrations of 2.2 ug/m^3 for the 24-hour criterion and 0.6 ug/m^3 for the annual criterion. The Applicant advised the predicted exceedance was partially attributed to elevated background concentrations. • During exhibition of the EIS, EPA raised concerns in regard to operational air quality impacts, including locomotive and container handling emission performance standards and predicted ground level concentrations for $PM_{2.5}$, PM_{10} and NO_2 at the nearest sensitive receivers. • As part of the RtS, the Applicant submitted a revised AQIA that included modelling for locomotives operating with and without upgrade kits. The revised AQIA predicted an exceedance of the $PM_{2.5}$ cumulative 24-hour criterion (3.1 ug/m^3 exceedance) and annual criterion (1.0 ug/m^3 exceedance). The project $PM_{2.5}$ contribution was considered greater than predicted in the EIS, with predicted incremental concentrations of 4.6 ug/m^3 for the 24-hour criterion and 1.2 ug/m^3 for the annual criterion. • The EPA considered the increased annual average project $PM_{2.5}$ contribution to 1.2ug/m^3 as significant. • In response to advice received from the EPA on the RtS, the Applicant committed to implement Euro IV compliant container handling equipment that would facilitate a particulate matter emission performance of 0.025 g/kWh. The Applicant advised use of Euro IV (instead of Euro III) compliant container handling equipment would constitute an almost 10 times reduction in $PM_{2.5}$ concentrations, therefore the project increment would be substantially lower than the modelled value of 1.2 ug/m3 for $PM_{2.5}$ in the RtS.	• The Department considers that construction air quality impacts can be effectively managed through the implementation of best practice air quality management measures within the CEMP, to be approved by the Planning Secretary prior to the commencement of construction. • The Department has considered advice provided by the EPA regarding best practice operational emission standards, and recommended conditions requiring: o all container handling equipment purchased after 2019 to meet US EPA Tier 4 or EU Stage IV emission standards, or achieve an equivalent control performance to those standards listed o prior to the commencement of operation, preparation of a report that justifies the air quality technology proposed, in consultation with TfNSW and the EPA o port shuttle operations to use locomotives that implement best practice emission technologies. These conditions largely reflect those requirements to be in force for operations at the Moorebank Intermodal Precinct.

	• The Applicant also stated that contour plots provided in the revised AQIA showed that no additional exceedances for any pollutant were predicted at potential receivers. • Further, to reduce overall locomotive exhaust emissions, the Applicant committed to using Tier 0+ standard locomotives. Locomotives would be fitted with upgrade kits during their next major overhaul. • The Department considers that construction and operation of the proposal would not result in unacceptable air pollution, subject to the implementation of best practice management measures stated in the Applicant's RtS, and compliance with recommended conditions of consent.	
Aboriginal heritage	• The EIS included an Aboriginal Cultural Heritage Assessment (ACHAR). • No registered Aboriginal heritage sites are located within the proposal area, however one site (AHIMS site 45-5-3141) is located within Lot 2 DP876781, immediately to the north of the proposal area. • The ACHAR stated AHIMS site 45-5-3141 is located outside the proposal area and there would be no direct or indirect impact to the site. • However, AHIMS site 45-5-3141 could not be located during site surveys undertaken by the Applicant, due to significant vegetation growth on the site. • The Department notes the RtS proposed additional land for a bio-retention basin at the northern end of the site, adjacent to Little Creek. It is further noted the inclusion of additional land for the basin has significantly reduced the buffer distance between the project boundary and AHIMS site 45-3-3141.	• The Department has recommended a condition requiring the Applicant to avoid harm to AHIMS site 45-5-3141. • The Department has recommended the preparation and implementation of an unexpected finds protocol to outline procedures for managing site works if surface disturbance identifies a new Aboriginal object. • The unexpected finds protocol must form part of the CEMP, to be approved by the Planning Secretary prior to the commencement of construction
Non-indigenous heritage	• The Applicant prepared a Statement of Heritage Impact and Historic Archaeology Assessment. • The assessment stated the proposal is located within 100m of the St Marys Railway Station Group, which is listed on the State Heritage Register (SHR). The Ropes Creek branch railway line is present on the site and of local heritage significance. • The assessment concluded there would be no physical impacts on SHR St Marys Railway Station Group, except for a minor visual impact that would be mitigated by vegetation growth and distance to the container laydown area. The significance of the Ropes Creek branch railway line would not be compromised from the proposal. • Potential archaeological items associated with the Ropes creek branch railway line have been assessed to have little to no significant heritage value.	• The Department has recommended the preparation and implementation of an unexpected finds protocol to outline procedures for managing site works in the event any unexpected archaeological relics are uncovered during the work. • The unexpected finds protocol must form part of the CEMP.
Hazards	• The proposal includes a fuel storage area for 30,000L of diesel fuel, 1,000kg of lubricating oils and greases, 100kg of engine degreasers and 1,000kg of high pressure soap/foams. • The Department agrees with the Applicant's position that the proposal does not trigger the SEPP 33 threshold limit.	• The Department has recommended a condition requiring the quantities of dangerous goods stored and handled on site to comply with the SEPP 33 guideline. • The Applicant is also required to store and handle all chemicals,

		fuels and oils within the development in accordance with all relevant Australian standards and EPA guidance, to ensure that the proposal would not become potentially hazardous post-approval.
Biosecurity	• While containers are not proposed to be unpacked on site, the Department acknowledges that the Australian Government has identified that cargo containers entering Australian ports may pose biosecurity risks (such as the spread of exotic pests) if not managed to comply with biosecurity conditions. • The Applicant's EIS asserts that, where relevant, containers will be treated onsite to Australian Quarantine and Inspection Service (AQIS) requirements. This could involve fumigation and degassing of containers. • The Department accepts AQIS standards but notes separate approvals may be required should additional infrastructure be required.	• The Department has recommended a condition requiring the Applicant to treat all freight containers on site to AQIS requirements as relevant.
Visual Impact	• The Applicant undertook a Visual Impact Assessment (VIA) to consider off-site visual impacts of the proposal. • A total of eight representative viewpoints were assessed in proximity to the proposal, including a mix of industrial, recreational, residential and commercial receivers. • The VIA concluded no viewpoints would be moderately or highly visually impacted by the proposal. However, St Marys High School located to the south of the existing rail corridor, would experience moderate-low visual impacts without the implementation of mitigation measures. • To mitigate visual impacts on St Marys High School, the Applicant proposed to maintain existing vegetation along the southern boundary of the proposal area and plant an additional tree screen recommended in the VIA. The plantings must be one row deep, native and fast-growing species with a mature height of 10-11m. • The Applicant also committed to use of non-reflective materials, colours and finishes on buildings within the proposal area, and direct light spill away from residential receivers to the south during construction.	• The Department considers the implementation of management measures outlined in the Applicants VIA as appropriate to mitigate visual impacts of the proposal. • The Department recommended the Applicant prepare a Landscape Management Plan prior to the commencement of construction, to manage landscaping works on site, including the planting and retention of mature trees.
Landscaping	• The Applicant prepared a preliminary Landscape Masterplan. • The landscape proposed included retention of existing vegetation within the riparian corridor directly to the north of the development area and within road verges, treatment of the new internal road verges and carparking areas and vegetation and screen planting • Proposed landscaping would comprise a range of endemic tree plantings, with most species from the Mitchell Landscapes Hawkesbury-Nepean Channel.	• The Department recommended a condition requiring the Applicant prepare a Landscape Management Plan, prior to the commencement of construction, to manage revegetation and landscaping works on site. • The plan must provide for the planting of at least 139 trees, detail the location, species, maturity and height at maturity of plants to be planted on site, include species indigenous to the local area, and include the

		planting of trees with a pot container of 75 litres or greater. • Prior to the commencement of operation, the Applicant must prepare an Operational Landscape Management Plan, describing ongoing monitoring and maintenance to manage revegetation and landscaping.
Groundwater	• The Applicant prepared a Groundwater Level Investigation report to investigate and assess groundwater levels on site. • Groundwater levels on site were generally recorded at a depth greater than 3m below existing surface levels. • The Applicant advised excavation on the site would generally be between 1.5m to 2m below the existing surface level, with small specific locations (i.e. for an underground water tank) having depths up to 3 m below existing surface levels. • The Department notes the proposal is not expected to intersect existing groundwater levels or flows on site. However, the Applicant has committed to undertake additional groundwater monitoring at specific locations, in the event proposed excavation works are revised to be 3m or more below the existing surface level. • The Applicant also prepared a Preliminary Site Contamination Investigation Report which considered that there is a low potential for groundwater contamination on site.	• The Department considers that potential groundwater impacts during construction can be effectively managed through the implementation of a groundwater management plan within the CEMP. • The Department has also recommended a condition requiring the Applicant prepare an unexpected contamination procedure, prior to the commencement of earthworks, to ensure potentially contaminated material is appropriately managed. • In the event excavation is required at a depth greater than 3m below existing surface levels, the Department recommends additional groundwater monitoring and assessment be undertaken at the impacted location.

7. Evaluation

The Department reviewed the EIS, RtS and supplementary information provided by the Applicant, and assessed the merits of the proposal, taking into consideration advice from the public authorities, including Council. Issues raised have been considered and environmental issues associated with the proposal have been assessed. The Department concludes the impacts of the proposal are acceptable, can be appropriately mitigated through the implementation of the recommended conditions of consent, and the proposal is in the public interest and can be approved, subject to conditions of consent.

The proposal would provide construction and operation of an intermodal (road and rail) terminal and container park with an ultimate operating capacity of 301,000 TEU (freight container) annual throughput. Overall, the Department considers that the proposal has considerable strategic merit as an important element of future freight distribution in Western Sydney. St Marys is also identified as a Strategic Centre within the Western Sydney industrial and urban services land and freight assets.

The Department has considered the merits of the proposal in accordance with objects and relevant matters under section 4.15(1) of the EP&A Act, the principles of ecological sustainable development, and the issues raised in submissions. The Department has recommended conditions of consent to manage the construction and operation of the proposal, including operational traffic impacts to the local road network, heavy vehicle access to the site and operational noise impacts. The Department also recommended conditions to manage construction impacts on local infrastructure and residents.

The Department's assessment of the proposal concluded that:

- a detailed construction traffic and pedestrian management plan can set out sufficient controls to manage construction-phase traffic impacts
- operational traffic can be managed within acceptable levels of service at key surrounding intersections, provided the Applicant implements an operational traffic and access plan that details access arrangements and monitors key heavy vehicle origins and destinations, and provides for audits of traffic impacts as container movements increase throughout the life of the project and management measures are reviewed based on the audit findings
- construction noise impacts would not reach the highly affected noise levels and can be managed appropriately through the Construction Noise and Vibration Management sub-plan
- operational noise impacts can be mitigated by setting compliance based noise limits and requiring construction of a 3.0 m high noise barrier inside the southern barrier of the Sydney Trains corridor
- contamination impacts can be managed in accordance with the Applicant's Remediation Action Plan, Site Audit Report and Section A Site Audit Statement to verify remediation works
- biodiversity impacts would be appropriately managed and offset, subject to preparation of a Biodiversity Management sub-plan

- stormwater and flooding impacts can be managed through implementation of a stormwater treatment system on site, and preparation of a Stormwater Quality Management Plan
- operational air quality impacts from container stacking equipment and locomotives can be managed through implementation of best practice emission technologies.

The proposal is in the public interest and would provide a range of public benefits, including:

- additional freight distribution capacity in Western Sydney
- opportunities for increased transport of freight by rail between Port Botany and employment lands and communities in Western Sydney
- generate approximately 168 operational jobs (including train drivers) and 60 construction jobs.

The impacts of the proposal have been addressed in the EIS, RtS and supplementary information provided by the Applicant. Conditions of consent are recommended to ensure that these impacts are managed appropriately.

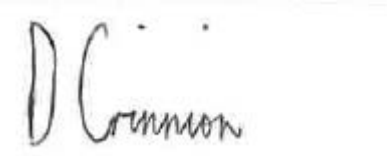
8. Recommendation

It is recommended that the Executive Director, as delegate of the Minister for Planning and Public Spaces:

- **considers** the findings and recommendations of this report; and
- **accepts and adopts** all of the findings and recommendations in this report as the reasons for making the decision to grant consent to the application;
- **agrees** with the key reasons for approval listed in the notice of decision;
- **grants consent** for the application in respect of SSD 7308; and
- **signs** the attached development consent and recommended instrument of approval (**Appendix C**).

Prepared by Nathan Heath, Planning Officer
Social and Infrastructure Assessments

Recommended by



Dominic Crinnion
Team Leader
Water and Intermodal Assessments

Recommended by

Karen Harragon
Director
Social and Infrastructure Assessments

9. Determination

The recommendation is: **Adopted** by:

7/5/2020

David Gainsford

Executive Director

Infrastructure Assessments

Appendices

Appendix A – List of Documents

The following supporting documents and supporting information to this assessment report can be found on the Department of Planning, Industry and Environment's website as follows:

1. Environmental Impact Statement
   https://www.planningportal.nsw.gov.au/major-projects/project/10636

2. Submissions
   https://www.planningportal.nsw.gov.au/major-projects/project/10636

3. Applicant's Response to Submissions
   https://www.planningportal.nsw.gov.au/major-projects/project/10636

Appendix B – Statutory Considerations

Environmental Planning Instruments (EPIs)

To satisfy the requirements of section 4.15(a)(i) of the EP&A Act, this report includes references to the provisions of the EPIs that govern the carrying out of the project and have been taken into consideration in the Department's environmental assessment.

Controls considered as part of the assessment of the proposal are:

- State Environmental Planning Policy (State & Regional Development) 2011 (SRD SEPP)
- State Environmental Planning Policy (Infrastructure) 2007 (Infrastructure SEPP)
- State Environmental Planning Policy No. 55 – Remediation of Land (SEPP 55)
- Draft State Environmental Planning Policy (Remediation of Land) (Draft Remediation SEPP)
- Draft State Environmental Planning Policy (Environment) (Draft Environment SEPP)
- Penrith Local Environmental Plan (PLEP) 2010.

Compliance with Controls

State Environmental Planning Policy (State and Regional Development) 2011 (SRD SEPP)

Table B1 | SRD SEPP compliance table

Relevant sections	Consideration and comments	Complies
3 Aims of Policy The aims of this Policy are as follows: (a) to identify development that is State significant development	The proposed development is identified as SSD.	Yes
8 Declaration of State significant development: section 4.36 (1) Development is declared to be State significant development for the purposes of the Act if: (a) the development on the land concerned is, by the operation of an environmental planning instrument, not permissible without development consent under Part 4 of the Act, and (b) the development is specified in Schedule 1 or 2.	The proposed development is permissible with development consent. The development is of a type specified in Schedule 1.	Yes
Schedule 1 State significant development – general (Clause 19) (1) Development that has a capital investment value of more than $30 million for any of the following purposes: … (b) railway freight terminals, sidings and inter-modal facilities (2) Development within a rail corridor or associated with railway infrastructure that has a capital investment value of more than $30 million for any of the following purposes: … (b) container packing, storage or examination facilities.	The proposed development comprises development of the purpose of railway freight terminals, and development associated with railway infrastructure for the purpose of container packing, storage or examination facilities, and has a CIV in excess of $30 million.	Yes

State Environmental Planning Policy (Infrastructure) 2007

The Infrastructure SEPP aims to facilitate the effective delivery of infrastructure across the State by improving regulatory certainty and efficiency, identifying matters to be considered in the assessment of development adjacent to particular infrastructure development, and providing for consultation with relevant public authorities about certain development during the assessment process.

The development constitutes traffic generating development in accordance with clause 104 of the Infrastructure SEPP as it comprises a freight transport facility. The Infrastructure SEPP requires traffic generating development to be referred to RMS for comment. The application was referred to RMS in accordance with the Infrastructure SEPP. Comments raised by TfNSW (RMS) are in **Section 5.**

The development is located within the vicinity of an electricity transmission or distribution network and in accordance with clause 45 of the Infrastructure SEPP, the development must be referred to the relevant electricity supply authority for comment. The application was referred to Endeavour Energy in accordance with the Infrastructure SEPP, and comments raised are outlined in **Section 5**.

The proposal is therefore consistent with the Infrastructure SEPP given the consultation and consideration of the comments from the relevant public authorities. The Department has included suitable conditions in the recommended conditions of consent (see **Appendix C**).

State Environmental Planning Policy No. 55 - Remediation of Land

SEPP 55 aims to ensure that potential contamination issues are considered in the determination of a development application. In particular, SEPP 55 aims to promote the remediation of contaminated land to reduce the risk of harm to human health and the environment by specifying under what circumstances consent is required, specifying certain considerations for consent to carry out remediation work and requiring that remediation works undertaken meet certain standards.

A full assessment of contamination issues associated with the proposal is provided in **Section 6.3**. The Department has included detailed specific conditions for finalising remediation and a Site Audit Statement. The Department is satisfied that, subject to the implementation of the recommended conditions, the site can be made suitable for its proposed industrial land use.

State Environmental Planning Policy No. 64 – Advertising and Signage

SEPP 64 applies to all signage that under an EPI can be displayed with or without development consent and is visible from any public place or public reserve.

The Applicant's EIS states that '[t]he proposed Freight Hub will include the provision of corporate signage, and the provisions of the Policy are applicable. A Signage Plan that complies with the requirements of the Advertising and Signage SEPP will be prepared as part of a subsequent detailed Development Application'.

Draft State Environmental Planning Policy (Remediation of Land)

The Draft Remediation SEPP will retain the overarching objective of SEPP 55 promoting the remediation of contaminated land to reduce the risk of potential harm to human health or the environment.

Additionally, the provisions of the Draft Remediation SEPP will require all remediation work that is to carried out without development consent, to be reviewed and certified by a certified contaminated land consultant, categorise remediation work based on the scale, risk and complexity of the work and require environmental management plans relating to post-remediation management of sites or

ongoing operation, maintenance and management of on-site remediation measures (such as a containment cell) to be provided to council.

The Department is satisfied that the proposal will be consistent with the objectives of the Draft Remediation SEPP.

Draft State Environmental Planning Policy (Environment)

The Draft Environment SEPP is a consolidated SEPP which proposes to simplify the planning rules for water catchments, waterways, urban bushland, and Willandra Lakes World Heritage Property. Once adopted, the Draft Environment SEPP will replace seven existing SEPPs. The proposed SEPP will provide a consistent level of environmental protection to that which is currently delivered under the existing SEPPs. Where existing provisions are outdated, no longer relevant or duplicated by other parts of the planning system, they will be repealed.

Given that the proposal is consistent with the provisions of the existing SEPPs that are applicable, the Department concludes that the proposed development will generally be consistent with the provisions of the Draft Environment SEPP.

Penrith Local Environmental Plan (LEP) 2010

The Penrith LEP 2010 aims to encourage the development of housing, employment, infrastructure and community services to meet the needs of the existing and future residents of the Penrith LGA. The Penrith LEP 2010 also aims to conserve and protect natural resources and foster economic, environmental, and social well-being.

The Department has consulted with Council throughout the assessment process and has considered all relevant provisions of the Penrith LEP 2010 and those matters raised by Council in its assessment of the development (**Section 5**). The Department concludes the development is consistent with the relevant provisions of the Penrith LEP 2010. Consideration of the relevant clauses of the Penrith LEP 2010 is provided in **Table B2**.

Table B2 | Consideration of the Penrith LEP 2010

Clause	Department Comment/Assessment
Clause 4.3 Building height	Not Applicable.
Clause 5.10 Heritage conservation	The Department's consideration of heritage matters is provided in **Section 6.6**.
Clause 7.1 Earthworks	The Department has recommended a suite of conditions that would manage any applicable earthworks, including conditions governing remediation, construction traffic and waste management, and management of unexpected heritage finds.
Clause 7.2 Flood Planning	The Department's consideration of flooding is provided in **Section 6.5**.
Clause 7.4 Sustainable development	The Department has considered the principles of sustainable development where applicable in **Section 4**.

Clause 7.5 Protection of scenic character and landscape values	The Department notes that part of the site is land identified as “land with scenic and landscape values”. The Department is satisfied that measures will be taken to minimise the visual impact of the development from major roads and other public places, including planting of screening vegetation, and has recommended the Applicant prepare and implement a landscape management plan to reflect the Applicant’s commitments.
7.6 Salinity	The Department acknowledges that the Applicant has committed to test and manage salinity as part of its management plan for construction and considers that appropriate measures can be taken to reduce any undesirable effects as part of site preparation and construction.
7.7 Servicing	The Department considers the Applicant has provided sufficient commitment to ensure adequate servicing of the site.

Other policies

In accordance with clause 11 of the SRD SEPP, Development Control Plans do not apply to State significant development.

Appendix C – Recommended Instrument of Approval